

# SYLLOGE FUNGORUM

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## SUPPLEMENTUM UNIVERSALE

Pars X

Phycomycetæ, Laboulbeniomycetæ
Pyrenomycetæ p. p.

**OURANTE** 

ALEX TROTTER

(Collab. P. A. et Dom. SACCARDO, G. B. TRAVERSO, A. TROTTER)

Fol. 44 — Pretium it. lib. aureis 60

ABELLINI
Die 15 Julii MCMXXVI
Sumptibus Coheredum SACCARDO

TYPIS PERGOLA

## PHYCOMYCETÆ DE BARY

Syll. VII p. 181, IX p. 335, XI p. 239, XIV p. 432, XVI p. 383, XVII p. 494, XXI p. 815.

## Fam. 1. Mucoraceæ Nees em. De Bary

MUCOR Mich. — Syll. VII p. 190, IX p. 335, XI p. 239, XIV p. 432, XVI p. 383, XVII p. 494, XXI p. 815.

1. Mucor lusitanicus Bruderlein, Bull. Soc. Bot. Genève, 1916, p. 273-3315 276, f. 1-2. — Hyphis sporangiferis ramosis 2-30 mm. altis, 9-17  $\mu$  cr.; sporangiis globosis 45-70  $\mu$  diam.; tunica granulosa, in aqua in fragmenta se findente, basi columellae inserta; columella sphaerico-ovoidea, 45-56  $\mu$  longa 30-40  $\mu$  lata; sporis ellipsoideis, hyalinis, 6-8  $\mu$  diam.; zygosporis ignotis; chlamydosporis frequentissimis  $10-30 \approx 11-20$ ; oidiosporis raris  $15 \approx 9$ .

Hab. in farina Maydis, in valle Douro, Lusitaniae. — Affinis Muc. racemoso et M. christianiensi.

2. Mucor pallidus Naoumoff in lītt., Mucor sp. Scripta botanica, fasc. 3316 XXIX p. 72 t. IX fig. 9-15. — Mycelio albo-flavido; hyphis sporangiferis erectis demum decumbentibus, vix 1 cm. altis, parce ramosis, 8-10 μ cr.; sporangiis minutis levibus, sphaericis, 40-60 μ diam., membrana diu insolubili; columella sphaerica, 35-40 μ diam., levi, diaphana, collario basi praedita; sporis ex ellipsoideo cylindraceis, utrinque rutundatis 5-6 × 2,5-3,5; zygosporis brunneis, e sphaerico oblongis 35-45 μ longis, irregulariter tuberculosis.

Hab. cultus in laboratorio botanico, Petropoli, Rossiae.

3. Mucor spinosus Van Tiegh. — Sacc., Syll. VII P. I, p. 191.— var. 3317 recurvus Grove, Journ. of Biol. v. VI, 1911, p. 39, tab. III fig. 4.— A typo differt ramulis arcuato-recurvis et ramificatione plerumque sympodiali, nec ut in tipo plerumque monopodiali.

Hab. in culturis, Birmingham, Anglia.

4. Mucor botryoides Lendner (deest in Syll., sed ubi descriptum?) — 3318 var. minor Jensen, Fung. Fl. of Soil, Cornell Univ., Coll. of Agric., Bull. 315 (1912) p. 457, c. ic. — A typo differt sporangiis brunneo-

Syll. fung. XXIV (IV-1925)

atris, sporangiophoris crassioribus, ultra 30 µ latis, sporis minoribus omnino levibus. 4.5-8 µ diam. (typice 6 µ); chlamydosporis limoniformibus, 16-22 v 10-16.

Hab. e solo cultus, Ithaca N. Y., Amer. bor.

5. Mucor muriperda Sacc. et Sinig., Ann. Mycol. XI, 1913, p. 321. 3319 Late effusus, sordide albus, mox (in Agar cultus) luride griseo-olivascens, byssine-velutinus; hyphis mycelicis dendritice repetito ramosis repentibus rarius rhizinis praeditis, hyphis primariis concoloribus erectis filiformibus 14-18 u cr. sursum vage ramosis, distincte et frequenter septatis; ramis sursum ternatis varieae longitudinis. ascendentibus, apice sporangiophoris; sporangiis subglobosis, glabris, levibus, 30-40 p diam., rarius usque ad 60, initio pallidis demun saturate grisco-olivaceis; columella globosa, vel ellipsoideoglobosa, levi 28 p diam. vel 28 > 25, basi interdum fragmentis minimis tunicae sporangii cincta, olivacea; sporis exiguis, globosis v. globoso-ellipsoideis, 3,7-4,2 µ diam. v. 4,2 × 3,5-4, levibus, subhyalinis Chlamydosporae intercalares et zygosporae rudimentales in mycelio occurrunt.

Hab. in Mure musculo var. albina, cui mortem attulit. in Laboratorio Pathologiae Chirurgicae Universitatis Mutinensis. hieme 1913. (Doct. GEORG. SINIGAGLIA).

- Obs. Ad stirpem Mucoris racemosi videtur pertinere sed colore totius fungi mox saturate olivaceo, hyphis distincte septatis, sporis minoribus facile distinguitur. Praeterea dignoscitur quia hic valde pathogenus, dum Mucor racemosus innocuus experimentis nunc peractis demonstratur. Est affinis quoque Mucori pusillo, sed sporangia nunquam crystallis oxalati calcici conspersa. A Mucore corumbifero colore mox luride olivaceo, defectu apophysis sub sporangiis, sporis plerumque sphaericis etc. distinguitur.
- 6. Mucor cornealis V. Cavara et Sacc., Ann. Mycol. XI, 1913, p. 321; 3320 Cavara V., Una forma di cheratomicosi. Pavia 1913, in Annali Ottalmol. XLII fasc. 9-10, con tav. - Mycelio laxe intertexto, candido, mox (in lacte, pane, tuberoque Solani exculto) cinereo-plumbeo, temperatura + 37 C rapide et copiose se evolvente, aegre vero temp. + 15 C vel supra + 51 C; hyphis sterilibus effusis, validis, dendritice ramosis, usque ad 14.15 µ, continuis, hyalinis. apicem versus corymboso-v. racemoso-ramosis; ramulis sporangiophoris nunc alternis nunc oppositis, simplicibus v. dichotome partitis, longitudine varia, 80-300 \* 7-8, plerumque sub angulo 45-60° patentibus, sursum sensim leviter incrassatis, sed sub sporangio

non coarctatis, achromis, apice fuscellis; sporangiis globosis v. subglobosis, tunica diaphana levi praeditis, 40-44  $\mu$  diam. (rarius usque ad 50-55  $\mu$  diam. et subinde tantum 15-22  $\mu$ ); columella distincta, obovato-piriformi, plus minus dilute fusca, 22-24  $\mu$  lata; sporis tunica tenuissima hyalina, levigata praeditis, senio dilute flavicantibus, typice globosis, 4-4,5  $\mu$  diam., rarius globoso-ovoideis; zygosporis ignotis.

Hab. in cornea oculari hominis, cui pathogenus et ceratomycosis formam generans, Senis, Etruriae, Italia media, vere 1912. (Doct. VICTORIANUS CAVARA).

Obs. Sine dubio ob sporarum et sporangiorum parvitatem et ramorum dispositionem ad stirpem *Mucoris racemosi* pertinet. In primis est *Mucori Regnieri* Luc. et Cost. immo magis *M. corymbifero* affinis, sed notis allatis et praesertim vi pathogena peculiari distingui meretur.

7. Mucor globosus Fisch.—Sacc. Syll. XI p. 239.—Ann. Mycol. XI, 3821 1913, p. 567.—var. intermedius Sacc.—Caespitulis effusis, humilibus, griseo-olivascentibus; ramulis sporangiophoris saepius patenti-arcuatis, copiose septatis 14-20 μ crassis; sporangiis globosis 90-100 μ diam., brunneis; sporangiis lateralibus paullo minoribus; columella globosa 40-45 μ diam., hyalina; collario tenui saepe remanente; sporis globosis 7-8 μ diam., levibus, olivaceo-fuscellis.

Hab. in contextu pathologico pedis humani, cultus in clinica cheirurgica pisana Italiae (in tubere Solani et agar), (Doct. G. Tereal Abrami). — Inter Muc. globosum et M. lamprosporum Lendn. videtur medius, a primo differt hyphis crassioribus, columella typica sphaerica, ramulis saepius curvis, sporangiis lateralibus paullo minoribus, ab altero sporarum colore, ramulis non semper recurvatis etc. A M. sphaerosporo dignoscitur colore numquam rubente etc.

8. Mucor griseo-lilacinus Povah, Bull. Torr. Bot. Club 44., p. 301, tab. 3322 18 fig. 5-10 (1917). — In pane floccum densum murino-griseum, aetate subavellaneo-tinctum, 1-1,5 cm. altum efformante; sporangio-phoris 8-20 μ diam., initio simplicibus dein ramis lateralibus 1-2 iterum ramificatis praeditis, ramis semper in sporangium abeuntibus et ad basim septo transverso praeditis; sporangiis globosis vel subglobosis, 60-80 μ diam. (extremis 40-100 μ) primo luteolis dein griseo-virescentibus, membrana deliquescente limbum basalem relinquente, columella libera vel vix adnata; globosa vel subglobosa, 12-67 μ, saepius 27-43 μ diam., lilacino-griseo-tincta; sporis conformibus, ovoideis 4-6 ≈ 3-4, raro usque ad 8 ≈ 6 vel 10 ≈ 5 μ

coacervatis pallide griseis; chlamydosporis et oidiis praesentibus in hyphis, chiamydosporis e globoso doliiformibus, 10-30  $\mu$  diam, hyphis, praecipue substrato proximis membrana lilacino-tineta praeditis, contentu saepe aurantiaco-luteo; zygosporis non visis (species verisimiliter heterothallica).

Hab. in fimo, caulibus putrescentibus, foliis corruptis, in fungis etc., in Amer. bor.

9. Mucor varians Povah, Bull. Torr. Bot. Club 44. p. 298, tab. 20 3323 fig. 1-6 (1917). — In pane floccum densum ex eburneo-luteo subolivaceum v. alutaceum, 1-3,5 cm. altum efformante; sporangiophoris 8-20 µ diam., parce vel copiose ramosis, intricatis, contortis vel convolutis, hyphis et columellis saepe proliferantibus; sporangiis globosis vel subglobosis, levibus, 43-116 µ diam. (plerumque 60-80 µ), initio luteolis vel pallide aurantiacis demum saturate griseis, viridi-tinctis, membrana deliquescente, limbum basalem relinquente, columella libera vel tenuiter adnata, forma maxime ludibunda: subglobosa, hemisphaerica, hemisphaerico-applanata, ovali, cylindrica, elliptica, piriformi, panduriformi, subconica, 18-70 × 12-59 (med. 25-50 × 20-45), protoplasmate aurantiaco farcta vel vacua, membrana griseola; sporis non uniformibus, ex ovoideo subellipsoideis, raro sphaericis, 4-6 = 3-4 (extremis 4-14 = 3-8) aliis irregularibus reniformibus vel cruciformibus haud raro intermixtis; zygosporis non visis (verisim. species hetherothallica).

Hab. in fimo, terra, lignis, fungis, in America bor.

10. Mucor coprophilus Povah, Bull, Torr. Bot. Club, 44., p. 297, tab. 19 3324 fig. 1-5 (1917). — In pane floccum laxum griseo-olivaceum 2-2,5 cm-alto efformante; sporangiophoris brunneis 27-46  $\mu$  diam., ramulis elongatis vel brevibus, simplicibus vel ramosis, tenuibus praeditis, ramis in sporangia tenuia saepe decidua 20-60  $\mu$  diam. abeuntibus; sporangiis majoribus terminalibus globosis, incrustatis, 185-235  $\mu$  diam., initio albicantibus dein atris, membrana mox deliquescente (sporangis minoribus exceptis) et limbum basalem relinquente; columella libera, e cylindrico piriformi, 110-160  $\times$  70-113, brunneola, interdum contentu aurantiaco farcta; sporis in sporangis majoribus stricte ellipsoideis, 13-16  $\times$  5-6, in minoribus late ellipsoideis, 9-12  $\times$  7-8; chlamydosporis raris in sporangiophoris; zygosporis non visis (verisimiliter species heterothallica).

Hab. in fimo cuniculino, in Amer. bor. — M. griscosporo affinis. Huc pertinere videntur specimina in Ellis et Everh., North Amer. Fungi 972, sub nom. M. Mucedo distributa.

11. Mucor abundans Povah, Bull. Torr. Bot. Club, 44., p. 292 tab. 17 3325 fig. 1-6 (1917). - In pane floccum densum, erectum, fumoso-griseum avellaneo-tinctum, 1,5-3,5 cm. altum efformante; sporangiophoris 8-23 µ diam., initio simplicibus dein ramulos 1-3 laterales gerentibus, ramulis ipsis iterum 1-2-vel pluries ramificatis et in sporangium abeuntibus, ramis ad basim septo praeditis; sporangiis globosis vel subglobosis, levibus vel tenuiter incrustatis, 39-98 µ diam. utplurimum 56-78 initio luteolis dein fusco-griseis, maturis viridulotinctis, membrana deliquescente limbum basilarem relinquente, columella e subgloboso piriformi libera v. tenuiter adnata, 21-66 × 20-55, hyalina vel griseo-tincta; sporis variabilibus, e globoso late ellipsoideis, 3.5  $\mu$  diam. vel 4-5,5  $\approx$  3-4,5 (paucis 8  $\approx$  6); chlamydosporis et globulis luteolis in mycelio submerso; zygosporis non visis (verisimiliter mycelio heterothallico).

Hab. in fimo, ad terram, ad lycopersica putres, in Amer. bor. — M. griseo-lilacino et M. hiemali affinis.

12. Mucor griscosporus Povah, Bull. Torr. Bot. Club, 44., p. 297 tab. 3326 18 fig. 1-5 (1917). — In pane floccum laxum, erectum, griseo-olivaceum, brunneo-tincto, 3-4 cm. alto efformante; sporangiophoris membrana brunneola praeditis, 20-70 µ diam., typice simplicibus vel ramulis brevibus 1-2 lateralibus in sporangia abeuntibus praeditis, in culturis vetustis septatis; sporangiis globosis, terminali  $250\text{-}300~\mu$  diam., crystallino-incrustato, lateralibus supra  $100~\mu$  diam., initio luteolis, maturis saturate griseis, membrana deliquescente (in sporangiis minoribus persistente) limbum basilarem relinquente; columella libera, piriformi, basi inflata vel panduriformi, 115-242 \* 88-165, contentu plerumque pallide aurantiaco; sporis uniformibus, ellipsoideis, 8-15 > 5-8 griseis, coacervatis subatris, adglutinatis; zygosporis non visis (mycelio verisimiliter heterothallico).

Hab. in fimo, in Amer. bor. - M. piriformi affinis.

13. Mucor aromaticus Povah, Bull. Torr. Bot. Club, 44., p. 296, tab. 3327 17 fig. 7-11 (1917). - In pane floccum laxum luteo-ochraceum vel ochraceo-aurantiacum 2-3 cm. altum efformante; sporangiophoris 20-50 µ diam., typice simplicibus vel ramulos 1-3 laterales sporangiferos gerentibus; sporangiis globosis, 100-160 µ diam., crystallis minutis incrustatis, plus minusve diaphanis, membrana deliquescente, limbum basalem relinquente vel non; columella libera, e subgloboso ovali, subpiriformi, 50-120 × 43-105, contentu protoplasmatico praedita vel vacua; sporis uniformibus, ellipsoideis, 18-20 ≥ 10 (extremis 15.35 ≥ 7.14) raro ovatis vel subsphaericis; zygo-

sporis non visis (verisimiliter mycelio heterothallico).

Hab. in fimo, in Amer. bor .- Culturae odorem aromaticum camphoraceum effundunt.

- 14. Mucor rhizophilus Gorjeonne, Flora 1911, p. 147 (nomine nobis 3328 tantum nota).
- BLAKESLEA Thaxt., Bot. Gaz. LVIII (1914) p. 343 (Etym. a cl. BLAKESLEE biologiae sexualis Phycomycetum scrutatore). - Mycelium gossypinum, copiose chlamydosporiferum. Sporangia biformia; majora solitaria Choanophorae similia, columella praedita et sporas atras, utrinque ciliatas appendiculatas generantia; minora (sporangiola) columellà carentia sporas paucas atras utrinque ciliato-appendiculatas gignentia et coria vesiculam capitatim disposita.
- 1. Blakeslea trispora Thaxt., l. c. t. XXVI-XXVII. Mycelio e hyalino 3329 aurantio; hyphis fertilibus erectis, subinde helicoideo incurvis variis; sporangiis sphaericis circinatis, majoribus 40-50 μ d., pariete granuloso-aspera, columellà ex hemisphaerico elongata; minoribus 14-16 μ d. distinctius grosseque rugosis, columella subnulla; capitulis sporangioliferis solitaris, sporangiola pauca ferentibus; sporangiolis plerum trisporis; sporis utriusque formae e purpureo rufo-brunneis, longitudinaliter striato-sulcatis, sporangiorum 8-10 v 4, sporangiolorum  $12 \approx 5$ .

Hab. in larvis corruptis ad flores Vignae sinensis. Gainesville Florida, Amer. bor.

CIRCINELLA Van Tiegh. - Syll. VII p. 215, XVII p. 501, XXI p. 821.

1. Circinella conica Moreau, Bull. Soc. Mycol. Fr., 1913, p. 340, c. icon. — 3830 Hyphis fertilibus apice ramulis sporangiferis subcorymbosis circinnantibus quandoque nonnulis sterilibus praeditis; pedicellis saepe septatis, sporangiis sphaeroideis, maturis 50-70 µ diam., flavidis, tunica oxalato calcico incrustata matura rimosa basi tantum persistente; columella parum subjacente, quandoque spinescente, saepe fragaeformi, subconica; sporis sphaeroideis, 6.10 µ diam., levibus, hyalinis, v. parum cyanescentibus; zygosporis non visis.

Hab. in fimo Elephantis, in Museo Hist. Nat. Parisiis, Gallia. - C. umbellatae, minoris et praecipue asperae affinis.

2. Circinella Sydowii Lendner, Bull. Soc. bot. Genève, sér. 2, V (1913) 3331 p. 29, c. ic. — Hyphis primariis tenellis, sursum flexis, ad angulum ramum verticaliter crescentem quasi hyphae primariae continuatio-

nem emittentibus, ramis quoque apice flexis et ramulum apice flexum emittentibus, apicibus hypharum et ramorum acutis, saepe septatis, e latere pedunculum (raro duo) sporangiferum circinatum gerentibus, ramis extremis circinatis sporangiferis; sporangiis globosis, 100-100 µ diam., columella cylindrica aut cylindro-conica aut conica, quandoque medio parum constricta, panduriformis; sporis sphaeroideis, griseis, 6.7 u diam.

Hab. in solutione sacchari in auri fodina, Johannesburg, Africa anstr.

RHIZOPUS Ehrenb. - Syll. VII p. 212, XI p. 240, XIV p. 435, XVI p. 385, XVII p. 502, XXI p. 822.

1. Rhizopus alpinus Peyronel, I Germi atmosfer. dei Funghi con mi- 3332 celio (1913) p. 17. - Hyphis repentibus, hyalinis vel dilute fuligineis, ludibundo diametro, hine inde in articulos secedentibus, caespitulos sordide albos, ob sporangia nigropunctatos efformantibus; sporangiophoris rectis vel curvulis, solitariis vel 2-5 fasciculatis. rhizoidibus omnino destitutis, 12-16 µ diam., sursum paullo incrassatis, ad basim saepe constrictis, pallide umbrinis, continuis vel prope basim septatis, 100-250 \* 6 (prope pedem) - 16; sporangiis nigris, globosis, 90-150 μ diam., impellucidis, tunica dilabenti praeditis; columella globosa, 25.40 µ diam., vel piriformi, 40.50 × 37.45; sporis globosis vel plus minusve angulosis, singulis dilute fuscis, coacervatis atris, levibus, 2-5 µ diam. Zygosporis ignotis.

Hab. e germinibus aëreis ex nemore Alni viridis, in liquido Raulini agaro consolidato cultis, Riclaretto (Pinerolo), Ital., bor.

2. Rhizopus Delemar (Boidin) Wehm. et Hanzawa, Mycol. Centrlbl. I 3333 (1912) p. 86, c. ic., IV, 1914 p. 193 - Mucor Delemar Boidin, nomen. — Caespitulis initio solutis, albis, dein densis, cinereis usque ad nigros; rhizoidibus brunneis valde ramosis; sporangiophoris erectis vel curvis, nigro-fuscis, usque ad 1-2 mm. altis, 22-26 µ crassis, more simplicibus, interdum autem valde ramosis, haud raro hine inde incrassatis ramosisque; sporangiis globosis, 90-270  $\mu$  diam. (plerumque 140-180) initio albis dein nigris, saepe minute aculeolatis; columellis subglobosis, 60-100 × 40-80, initio albis dein fuscis, levibus; sporis globosis vel ellipsoideis, saepe obtuse angulatis, e griseo brunneolis, 8-13 × 6-9; chlamydosporis hyalinis vel subfuscis, e cylindraceo globosis, 22-60 \* 17-30; zygosporis nondum visis. — Optime vegetat in tuberibus Solani; magnopere saccharificat amylum; fermentescit saccharosium, glucosium, fructosium, galactosium,

inulinam, raffinosium, maltosium; gelatinam tarde liquefacit; saccharum acidificat. - Opt. temp. 25-30°.

Hab. in a my lo saccharificatione subjecto, in Japonia.

3. Rhizopus kasanensis Hanzawa, Mycol. Centrlbl. I (1912) p. 408, tab. 3334 2 fig. 1 et V (1914) p. 235 fig. 4. - Primo albus dein e griseo nigricante; rhizoidibus valde ramosis e hyalino fuscis; sporangiophoris plerumque simplicibus, rectis vel parum curvatis, singulis vel 2-3 ad quoque nodum, initio hyalinis dein brunneis vel atris, 150-500 vel 1000-2000 μ altis, 6-25 μ crassis; sporangiis globosis, primo niveis demum atris, 60-180 µ diam., vel 37-195 × 165; columella lata, subglobosa, fusca, 40-120 µ diam.; sporis irregulariter sphaericis, saepius obtuse angulatis,  $4-7.2 \mu$  diam. vel  $3.6-7.8 \times 4.2-9.6$ , striatulis, fuscidulis; chlamydosporis evolutis, zygosporis non visis.

Hab. ex aere culto in Rossia; mycosim in oculis canis inducens.

4. Rhizopus ramosus Moreau, Bull. Soc. Bot. Fr. LX (1913) p. 220. - 3335 Mycelio hyalino repente, sporangiophoris erectis, raro simplicibus, plerumque furcatis vel umbellato-ramosis, ad basim ramorum inflatis (ramis ut videtur e sporangio rudimentali nascentibus); sporangiis sphaeroideis, 100 µ et ultra diam., membrana incrustata; sporis ovatis, striatulis, griseo-fuscidulis, 6 > 3.4; columella hyalina, sphaerica, basi collariata.

Hab. in Gallia - Affinis Rh. nigricanti sed bene distinctus.

5. Rhizopus Usamii Hanzawa, Mycol. Centrlbl. I (1912) p. 408, V (1914) 3336 p. 237, fig. 6.—Ex hyalino griseo-brunneus vel nigro-brunneus; rhizoidibus, interdum deficientibus, e nodulis 19.24 µ crassis orientibus, parce ramosis, primo hyalinis dein brunneis, sporangiophoris rectis vel curvatis, ramosis vel non, interdum hic inde vesiculoso-inflatis, 225-500 \mu altis (interdum usque ad 2530), 12-24 \mu latis, e hyalino brunneis; sporangiis globosis, erectis, 60-180 µ diam. vel 84-180 ≈ 72-150, initio hyalinis dein atro-brunneis; columella globosa 60-120 μ diam. vel ovoidea, 48-113 × 40-120, e hyalino fuscidula levi; sporis pallide griseis vel brunneolis, proteiformibus: globosis, ovatis, cylindraceis vel obtuse angulosis, 3,6-7,2 µ diam. vel 3,6-7,8 \* 4,2-9,6; chlamydosporis praesentibus, zygosporis non visis.

Hab. in « Tanekoji », in Japonia (USAMI).

6. Rhizopus nigricans Ehrb. — Syll. VII p. 212 — var. minor Jensen, 3337 Fung. Fl. of Soil, Cornell Univ., Coll. of Agric., Bull. 315 (1912) p. 447, c. ic. — A typo differt sporangiophoris non ultra 2,5 mm. altis, nec ultra 28 µ crassis, sporis magis regularibus et angustioribus,  $4.5-10 \approx 4.2-6.6$ , obscure fuligineis.

Hab. e solo cultus, Ithaca N. Y., Amer. bor. — var. verticillatum
Demelius, Verh. zool. bot. Ges. Wien, Bd. 66., 1916, p. 489, fig. 1.—
A typo recedit, hyphis fertilibus ad apicem 4,6 subverticillato-umbellatis; hyphis rhizoideis parum evolutis, conidiophoris brunneis.
Hab. ad folia C i c h o r i i, Vindobona, Austria.

7. Rhizopus Trubini Hanzawa, Mycol. Centrlbl. I (1912) p. 408 tab. 3338 2 fig. 4 et V (1914) p. 236, fig. 5. — Initio albidus dein e griseo-albo brunnescens; rhizoidibus, interdum deficientibus, parce ramosis, e hyalino fuscidulis; sporangiophoris plerumque 2-3 ad quoque nodum, rectis vel curvatis, simplicibus vel ramosis, interdum hinc inde vesiculoso-inflatis, 180-2000 μ altis, 4,8-26,4 μ latis; sporangiis globosis, maturis atris, 60-200 μ diam.; columella globulosa, ovoidea, subcylindracea vel piriformi, initio hyalina dein pallide brunnea, levi, 40-120 μ diam. vel 60-120 × 50-143; sporis irregulariter globosis, ovatis, subangulosis, magnitudine ludibundis, 3,6-7,2 μ diam. vel 3,6-7,2 × 4,8-8,4, griseis vel brunneolis, striatulis; chlamydosporis 16,8-28,8 × 9,6-21,6; zygesporis non visis.

Hab. ex aere culto, in Rossia.—In canibus inoculatus, mycosim laetalem inducit.

8. Rhizopus equinus Luc. et Cost. — Syll. XVII p. 502 — var. anna-3339 mensis P. N. Bernard, Bull. Soc. Mycol. 1914, p. 232, t. XIV. — Pedunculis sporangiferis binis aggregatis in hypha recta v. curva rhizoidifera, mucor ex penduculis singulis arhizoideis; sporangiis sphaeroideis supra et infra parum depressis, 48-84 μ diam.; columellis 48-52 × 18-24; sporis levibus rotundatis 4 μ diam.; chlamydosporis numerosis.

Hab. in expectoratione hominis bronchytis aegroti, Hué Annam, Asia. — Rh. equini Luc. et Cost. 1903 affinis.

ABSIDIA Van Tiegh. — Syll. VII p. 214, IX p. 337, XI p. 240, XIV p. 435, XVI p. 386, XVII p. 504.

Absidia cylindrospora Hagem, Videnskabsselsk. i Kristianïa, 7 febr. 3340 1907, et Unters. Norw. Mucor. in Videnskabs-Selskabets Skrift. 1.
 Math. Narturw. Kl. 1907, n. 7, p. 45 fig. 21. — Syn. Abs. spinosa Lendner, C. R. Seanc. Soc. bot. Genève, 18 febr. 1907, et Bull. Herbier Boissier 2.° ser. v. VII n. 3, 1907; Syll. XXI p. 824.
 Nomen Hagemi anterior et tunc servandum.

## PHYCOMYCES Kunze - Syll. VII p. 204, XIV p. 434.

1. Phycomyces spinulosus Morini, Mem. Accad. Bol., Sez. Sc. Nat. X 3341

1914 p. 97 tab. fig. 5-10. - A Phyc. nitenti, cui valde affinis, sporangiis, sporis et columellis mox distinguitur, zygosporis superficie processibus bitidis acutisque cum episporio nigricantibus exasperatis.

Hab. in fimo vaccino, sociis Pilobolis, in agro Bononiensi Ital. bor., parce.

- PERICYSTIS A. D. Betts, Ann. of Bot. XXVI, 1914, p. 795. -- Hyphae repentes vel suberectae, contextae, ramosae, septatae, cellulis multis in chlamydosporas se mutantibus, tandem saepe se dissolventes. Chlamydosporae terminales, laterales et intercalares, subglobosae vel irregulariter ovoideae, membrana crassa levi. Sporangia subglobosa vel ovoidea, ramis hypharum 3-5 fulta, sporis numerosis repletae; tunica sporangiorum membranacea, simplex, levis, tandem fusca. Sporae hyalinae, sphaericae, membrana crassa levi.
- 1. Pericystis alvei Betts, loc. cit. p. 795, tab. 75-76; Journ. of Eco- 3342 nom. Biol., VII, 1912, p. 155 fig. 23-25. — Characteres ut supra. Mycelio albo, hyphis 2.6 (saepissime 5) µ diam.; chlamydosporis 4,5-9,5 \* 4,5-7; sporangiis 20-40 \* 20-30; membrana tandem atroviridi; sporis 3,7-4,7 μ (saepissime 4,3 μ) diam.

Hab. ad pollinem, in favis Apis mellificae, in Britannia,

## ZYGORRHYNCHUS Vuill.—Syll. XVII p. 500, XXI p. 825.

1. Zygorrhynchus Dangeardi Moreau, Bull. Soc. Bot. Fr. 59 (1912) p. 3343 LXVII (1913). - Mycelio albido plerumque vix 1/2 cm. alto, in culturis senescendo griseo dein atro; sporangiis haud copiosis sporangiophoris ramosis suffultis, globulosis, luteolis, 25-65 µ diam. membrana in aqua disrumpente et collare basilare relinquente; columella levi, 12-32 \u03c4 alta, 12-36 \u03c4 lata; sporis ovoideis, 2-5 > 2-4,5, hyalinis, 1-2 guttatis; chlamydosporis raribus, ovatis, levibus, 30 × 15; zygosporis aëreis, ad superficiem substrati praecipue sese efformantibus, e fusione zygophororum initio similibus dein heteromorphis productis, utplurimum globosis, 18-48 µ diam, interdum vero retortaeformibus vel etiam cucurbitaeformibus, initio tuberculis minutis luteolis demum spiculis atris 3-5 µ longis saepeque recurvis, regulariter sparsis exornatis. - A caeteris speciebus differt praecipue quia e zygosporarum nucleis quatuor tantum bini inter se conjugantur.

Hab. in Gallia.

2. Zygorrhynchus Bernardi Moreau, Bull. Soc. Bot. Fr. LX (1913) p. 3844

256. — Mycelio albo, elevato; sporangiophoris botryose ramificatis; sporangiis sphaericis, 18-53  $\mu$  diam., paucis, columella subsphaerica, parum latiore quam alta, 11-23  $\times$  10-20; sporis ovoideis, 3  $\times$  2, levibus; zygosporis aereis, sphaeroideis, initio lutescentibus dein nigris, 32-50  $\mu$  diam., spinulis sparsis vel hine inde caespitosis, 3-5  $\mu$  altis ornatis; chlamydosporis doliiformibus, 30  $\times$  20.

Hab. in Gallia.

3. Zygorrhynchus japonicus Kominami, Mycol. Centrlbl., V p. 3 (1914) 3345 cum tab. — Hyphis sporangiferis 9·15 μ latis; sporangiis globosis, 56 μ diam., membrana in aqua diffluenti, columella subglobosa vel obovata, 30·45 μ alta, 20·30 μ lata; sporis ellipsoideis, hyalinis, variae magnitudinis, 3·10 ≈ 1,5·6; chlamydosporis levibus, ovoideoelongatis 40 ≈ 25; zygosporis globosis, episporio verrucoso brunneo, 68·80 μ diam.

Hab. in terra, ex culturis, Kamakoura, Japonia.

#### PILOBOLUS Tode - Syll. VII p. 184, XVII p. 505, XXI p. 827.

1. Piloholus Schmidtii Saccardo n., Piloholus sp. Alfr. Schmidt, Jahresb. 3346 Schles. Gesellsch., 1912 p. 19. — Conidiophoris solitariis e basi ovoidea, 560-720 × 340-400, dilute flavida, rhizoidibus praedita oriundis, cylindraceis 1,8 mm. altis, 120 μ cr., infra usque 140-160; vesicula subsporangiali ovoidea subhyalina, 800-1000 × 640-800, infra anulata, contentu granuloso aurantio; columella hyalina, apice rotundata, fortiter contracta, 250-370 × 180-270; sporangis hemisphaericis, nigris, 430-510 μ cr., 240-400 μ altis; membrana nigro-cyanea, verrucosa; sporis flavis, in aqua non secedentibus, ellipsoideis, tenuiter tunicatis, 6,5-8,5 × 5-6.

Hab. cum fimo Muli, ex Amani, Africae orient., in laboratorio bot. Breslaviae cultus. — Affinis P. Kleinii sed mensura partium diversa.

HAPLOSPORANGIUM Thaxt., Bot. Gaz. LVIII (1914) p. 362 — (Etym. haplos simplex et sporangium). — Mycelium filamentosum, contracto-septatum, ramosum, tomentosum. Sporangiophora radiatim evoluta, subcuspidata, sporangia singula v. bina 1-2-spora apicibus ferentia. Affine Mortierellae, a qua imprimis differt fabrica mycelii.

Haplosporangium bisporale Thaxt., l. c. p. 363 t. XXIX. — Ex albo 3347 flavidum; sporangiophoris cuspidatis, brevibus, indivisis v. furcatis, continuis 48-55 \* 5; sporangiis globosis, levibus, monosporis 8 μ diam., bisporis 11-12; sporis singulis sphaericis, binis hemi-

sphaericis, hyalinis, subinde minutissime rugulosis

Hab. in stercore suino, murino etc., E. Tennessee, Maine, New Hampshire, Amer. bor.

2. Haplosporangium decipiens Thaxt., l. c. p. 364 t. XXIX. -- Affine 3348 praecedenti, sed sporangiophoris jugiter majoribus, 60-65  $\mu$  longis; sporangiis semper monosporis et nutantibus 8-10  $\mu$  diam.; tunica rugoso-aspera; sporis sphaericis et levibus.

Hab. in stercore Selenodontis, ex ins. Hayti seu S. Domingo, Ind. occid., inde cultum.

- DISSOPHORA Thaxt., Bot. Gaz. LVIII (1914) p. 361 (Etym. dissos duplex, geminus, et phoreo fero). Hyphae fertiles ex mycelio tenui repente abrupte mutatae, indefinite crescentes ubique sporangiophora brevia simplicia edentes. Sporangia solitarie acrogena globosa. Sporangia et sporae ut in Mortierella.
- 1. Dissophora decumbens Thaxt., l. c. p. 361, t. XXVIII. Hyphis 3349 fertilibus primariis erectis, dein decumbentibus, firmis, apice indefinite crescentibus, raro septatis; sporangiis sphaericis, columella carentibus, 17-23  $\mu$  diam. in sporangiophoris sursum tenuatis, 100-150  $\approx$  8 acrogenis; sporis globoso-angulosis, 4  $\mu$  diam.

Hab. in stercore murino, pr. Cambridge Mass., Amer. bor.

- MORTIERELLA Coëm. Syll. VII p. 221, IX p. 337, XI p. 240, XVI p. 387, XVII p. 506, XXI p. 828.
- 1. Mortierella alpina Peyronel, I Germi atmosfer. dei Funghi con mi- 3350 celio (1913), p· 17. Effusa, tenuis, alba; hyphis sterilibus repentibus, ramosis, hyalinis, continuis, 0,5-4 μ diam·, sporangiophoris erectis, simplicibus deorsum crassioribus, sursum leniter attenuatis, protoplasmate aequali farctis, 70-100 × 5-7, in sporangium unicum abeuntibus; sporangiis sphaericis, 8-16 μ diam., levissimis, membrana hyalina; sporis ovalibus vel ellipsoideis, levibus, hyalinis, 3-4 × 1,5-2, absque nuclei vel guttulae vestigio.

Hab. e germinibus aëreis in agaro cultis, M. Cournour (Alpi Cozie), Ital. bor., alt. 2868 m.

2. Mortierella Traversiana Peyronel, I Germi atmosfer. dei Funghi 3351 con micelio (1913) p. 17. — Effusa, tenuis, sordide alba; hyphis sterilibus repentibus, ramosis, continuis, protoplasmate hinc inde granuloso farctis; sporangiophoris erectis, deorsum incrassatis, sursum attenuatis, 100-700 ≈ 6-8, simplicibus vel ramosis, et tunc ramis in racemum dispositis, sursum attenuatis, in sporangium abe-

untibus; sporangiis sphaericis, 15-40  $\mu$  diam., levibus, membrana hyalina praeditis; sporis globosis vel mutua compressione polygonis, 4-7  $\mu$  diam., raro ellipsoideis, usque ad 12  $\times$  7, hyalinis, episporio echinulato praeditis. Chlamydosporis rhombicis vel ellipsoideis, protoplasmate minute granuloso farctis, hyalinis, levibus, membrana crassiuscula instructis, 14-15  $\times$  9-12.

Hab. e germinibus aëreis in agaro cultis, M. Cournour (Alpi Cozie) Ital. bor., 2868 m. alt.

3. Mortierella globulifera O. Rostrup, Dansk. Botan. Arckiv. 2., 1916, 3352 n. 5, p. 2, fig. 1. — Hyphis sporangiferis caespitosis, continuis, simplicibus, basi incrassatis <sup>1</sup>/<sub>2</sub> mm. altis, infra 24-28 μ, supra 4,5-5,5 μ crassis, basi vesiculis subglobosis, hyalinis instructis; sporangiis globosis, albis, glabris, 40-48 μ diam.; sporis globosis, episporio tenuiter echinulato, 6-7 μ diam.

Hab. in fimo e qui no, S. Jaegersborg Dyrehave, Dania.

#### CUNNINGHAMELLA Matr. - Syll. XVII, p. 508, XXI p. 828.

1. Cunninghamella Bertholletiae Stadel, Dissert. Kiel (Lüdtke et Mar- 3353 tens ed.) 1911. — Nomine nobis tantum nota.

Hab. in Bertholletia putrescenti, ex Brasilia.

## Fam. 2. Entomophthoraceæ Schr.

EMPUSA Cohn. - Syll. VII p. 281, IX p. 349, XXI p. 831.

Empusa elegans Maimone, Centralbl. Bakt. II Abt., 40. (1914) p. 107, 3354
 tab. — Conidiophoris simplicibus, clavatis, cytoplasmate vacuoloso plurinucleato praeditis; conidiis typice piriformibus, apice truncatis, plurinucleatis, vacuolum centrale amplum praebentibus, 24-36 × 15-24; chlamydosporis globosis, membrana incrassata glabra praeditis, plurinucleatis, 36-63 μ diam.; gemmis (mycelio) multiformibus, in hospite intus crescentibus; conidiophoris et conidiis extus non efflorescentibus.

Hab. in larvis Porthesiae chrysorrhoeae, quas necat, Campobasso, Ital. austr.

ENTOMOPHTHORA Fres. — Syll. VII p. 282, IX p. 351, XIV p. 437, XVI p. 388, XVII p. 510, XXI p. 831.

1. Entomophthora Pseudococci A. T. Speare, Fungi Parasitic up. In- 3355 sects Injurious to Sugar Cane, Rep. Exp. Stat. Hawaij. Sug. Plant.

Ass., Bull. n. 12, 1912, p. 14, 26, tab. I-II. — Conidiis sphaeroideis subconoideo-papillatis, 20-25  $\mu$  cr.; conidiophoris plerumque simplicibus e mycelio emergentibus; conidiis secundariis presentibus, conformibus, e mycelio conidii primarii varie productis; sporis perdurantibus, zygosporis, sphaeroideis hyalinis, levibus, 20-27  $\mu$  cr.; hyphis rhizoideis presentibus, ex 2-3 hyphis simplicibus, apice ramosis, tortuose contextis efformatis.

Hab. in Pseudococco calceolariae parasiticum, Honolulu, Ins. Hawaj.

- 2. Entomophthora Henrici Molliard, C. R. Accad. Sc. Paris t. 167, 1918, 3356 p. 958. Hyphis conidiophoris ramosissimis; conidiis ovoideis, hyalinis, pluriguttulatis, apice non apiculatis, 20-24 × 13-18; conidiis secundariis conformibus; azygosporis sphaeroideis hyalinis, 32-36 μ diam.; cystidiis et chlamidosporis in cultura praesentibus. Hab. in Culice pipienti emortuo, Gallia.
- 3. Entomophthora Nebriae Raunkiaer, Botanisk Tidsskrift, XVIII, 3357 1892-93. Hyphis conidiophoris ramosis, septulatis, hyalinis, sursum claviformi-incrassatis, 11-15 μ latis; conidiis ellipsoideis vel fusiformibus, saepe subcurvatis, 28-37 μ longis, 10-13 μ latis, hyalinis, levibus; sporis perdurantibus latere hypharum mycelii hyalino-brunneoli extra corpore insecti evolutis, globosis, 35-50 μ diam., hyalino-brunneolis, episporio subcrasso levi tectis.

Hab. in Nebria brevicolli emortuo, in Dyrehaven propre Hauniam (Saellandia), (1888 legit Auct.).

4. Entomophthora Jaapiana Bubàk, Ann. Mycol. 1916, p. 341. — Sporis 3558 perdurantibus corpore pulvere laete flavo omnino implentibus et mumificantibus, inter articulos omnes linealiter exsurgentibus, globosis, 35-45 μ diam., hyalinis v. dilutissime flavidis, episporio 2-2,5 μ cr. glaberrimo; hyphis saepe ramosis, 10-14 μ cr. parte inferiore fortiter flexuosis, supra in parte sporigera clavatis, hyalinis, continus.

Hab. in cadaveribus Euacanthi interrupti, Oberkopt, ad 750 m. alt., in silva Thuringiaca, Germania (O. JAAP).

## Fam. 3. Chytridiaceæ De Bary et Wor.

PLEOTRACHELUS Zopf. — Syll. VII p. 315, XIV p. 440, XVI p. 389, XXI p. 835.

1. Pleotrachelus Ectocarpii Milla Jokl, Oesterr. Bot. Ztschr. LXVI, 3359

p. 267, tab. 4-5 (1916). — Mycelio nullo; sporangiis globosis, solitariis vel plurimis in quaque cellula, magnitudine maxime ludibundis, minimis 3,2  $\mu$ , maximis 40  $\mu$  diam., interdum irregularibus, e zoosporis amoeboideis directe orientibus, collum plerumque unicum, raro 3-4, 6-60  $\mu$  longum 2,5-10  $\mu$  crassum praebentibus, contentu granuloso farctis; zoosporis haud bene visis.

Hab. in cellulis Ectocarpi granulosi, prope Ergestem lecti.

Pieotrachelus Zopfianus Morini, Mem. Accad. Bologna, Sez. S. Nat. 3360 X, 1914, p. 77, tab. fig. 1-4.— Zoosporangiis globosis, pallide flavo-aurantiis, 41-47 μ diam.; zoosporas ovoideo-piriformes, uniciliatas, 3-4 μ longas includentibus, maturitate singulam v. binas appendices filiformes proferentibus; appendicibus membranam trophocystarum matricis perforantibus et zoosporis disseminantibus.

Hab. in trophocystis bicellularibus Piloboli Piroltani, in agro Bononiensi, Ital. bor.

- WOLKIA (Wolk) J. Ramsbottom, Trans. Brit. Myc. Soc. V, pt. 1., 1914, p. 143 (1914). Ita vocandum Protascus V. d. Wolk, Myc. Centr. III (1913) p. 153, cum extet anterius Protascus Dang., Syll. XVII p. 516.
- Wolkia decolorans (Wolk) J. Ramsb., l. cit. Protascus decolorans 3361
   V. d. Wolk, loc. cit. cum tab. col. Mycelio tenui, varie ramoso, copiose septato luteo-roseolo; ascis in ramis mycelii acrogenis, globosis, in juventute roseis, granuloso-farctis et grosse guttulatis; sporis in quoque asco numero variabilibus, 2-15, plerumque vero 15, ellipsoideis vel subglobosis, levibus, rufo-brunneis.

Hab. in caryopsidibus Oryzae sativae, quas colore luteo tingit, « yellow grains », Buitenzorg, Java.—Mensurae desiderantur.

## PROTASCUS Dang. - Syll. XVII p. 516.

Protascus subuliformis Dang. — Syll. XVII p. 516 — var. Maupasii 3362
 Maire, Bull. Soc. Hist. Nat. Afrique du Nord, t. VII, 1915, p. 50.—
 A typo differt thallo longiore pluri-(usque ad 8-) septato, articulis totidem sporocysta gignentibus; nec non cosporis heterogamicis globosis, levibus, 15-30 μ diam.

Hab. parasitice in corpore Rhabditis, Algeria, Africa bor.

OLPIDIUM A. Braun — Syll. VII p. 310, IX p. 362, XI p. 246, XIV p. 438, XVI p. 389, XVII p. 511, XXI p. 833.

1. Olpidium Viciae S. Kusano, Journ. Coll. of Agric. Tokyo, IV, 3 3363 (1912) p. 188, c. tab. - Zoosporangiis in cellulis epidermicis solitariis vel gregariis (saepe usque ad 20) ita ut sporangia quiescentia, forma et magnitudine variabilibus, cellulae hospiti conformibus quando solitariis, quando gregariis mutua pressione polygonalibus, 20-120 µ diam.; collo brevissimo, in sporangiis minoribus unico, in majoribus copiosis (4-7) e quibus vero uno tantum fungente; zoosporis hyalinis, ellipsoideis, vel ovatis, 6-7 × 5, cilio posteriore unico praeditis; sporangiis quiescentibus solitariis vel aggregatis (saepe ultra 10) in cellulis epidermicis, 17-47 µ diam., exosporio lutescente tenui, endosporio hyalino crassiusculo, e copulatione zoosporarum ortis.

Hab. in caulibus et foliis Viciae unijugae, Tokyo, Japonia.

- OLPIDIOPSIS Cornu. Syll. VII p. 299, IX p. 362, XI p. 247, XIV p. 439, XXI p. 834.
- 1. Olpidiopsis luxurians J. T. Barrett, Annals of Bot. XXVI (1912) 3364 p. 231, tab. 23-26. — Zoosporangiis solitariis vel numerosis, in cellula matricis plerumque intercalaribus viventibus, e ovalibus sphaeroideis, magnitudine variis, collis 1-3 extra cellulam matricis valde prominentibus ornatis; zoosporis minutioribus, elongatis, ciliis duobus apicalibus vel subapicalibus praeditis; oosporis sphaericis 25-50 µ diam., endosporio crasso, episporio tenui, spinis numerosis, conicis, basi dilatatis, apice acutissimis; antheridiis globosis, vel saepe ovoideo-ellipsoideis, 10-25 µ diam., membrana levi hyalina.
- Hab. in Aphanomyce laevi, Ithaca, N. Y., Amer. bor. 2. Olpidiopsis vexans J. T. Barrett, Annal. of. Bot. XXVI (1912) p. 231, 3365 tab. 23-26. — O. Saprolegniae A. Fisch. in Rabh. Krypt. Fr. Deutschl. I, IV, p. 38, non Cornu. - Zoosporangiis solitariis vel numerosis, in cellula matricis terminalibus vel intercalaribus viventibus, ellipsoideis, ovalibus vel sphaericis, magnitudine variis, 50-176 µ diam., hyalinis, membrana tenui, levi; zoosporis numerosis, elongatis, ciliis duobus apicalibus vel subapicalibus praeditis; oosporis griseis, sphaericis vel ovatis, interdum ellipsoideis, circ. 116 \* 84 (saepissime 50 μ diam.), endosporio crasso, levi, episporio tenui verrucoso; antheridiis hyalinis, sphaericis vel ovoideis, membrana tenui levi cinctis, 20 µ diam.

Hab. in Saprolegnia feraci, Ithaca, N.Y., Amer. bor.

SOROLPIDIUM Nêmec, Bull. int. Acad. Sc. Bohem., 1911; Ber. deutsch. bot. Ges., Bd. XXIX, 1911, p. 48.

Sorolpidium Betae Nêmec, l. c. p. 48.
 Hab. in radicibus emortuis Betae vulgaris, Europa med.

3366

#### WORONINELLA Rac. - Syll. XVI p. 392.

- 1. Woroninella aecidioides (Peck.) H. Sydow, Ann. Mycol. XII, 1914, 3367 p. 485. Ita vocandae sunt *Uredo aecidioides* Peck, *Uredo Pecki* Thümen, *Synchytrium decipiens* Farl., *Synchytrium aecidioides* Farl.
- 2. Woroninella Dolichi (Cke) H. Sydow, Ann. Mycol. XII, 1914, p. 485.— 3368
  Ita vocandum est Aecidium Dolichi Cke., Uromyces vignicola P.
  Henn.
- 3. Woroninella Puerariae (P. Henn.) H. Sydow, Ann. Mycol. XII, 1914, 3369 p. 486. Ita vocandum est *Uromyces Psophocarpi* Raciborski.
- 4. Woroninella citrina (Lagh.) H. Sydow, Ann. Mycol. XII, 1914, 3370 p. 486. Ita vocandum est Synchytrium aecidioides var. citrinum Lagh.
- Woroninella aequatoriensis H. Sydow, Ann. Mycol. XII, 1914, 3371
   p. 486. Sporae 20-28 μ diam.

Hab. in foliis Psoraleae Mutisii, Quito, Aequatoria, Amer. austr. (G. v. LAGERHEIM).

**SYNCHYTRIUM** De Bary. — Syll. VII p. 288, IX p. 357, XI p. 247, XIV p. 441, XVI p. 390, XVII p. 512, XXI p. 838.

Synchytrium trichophilum Correns et Tobler, ap. G. Tobler, Synsyrien, in Arch. Protistenk. XXVIII (1913) p. 174, tab. 12 fig. 35-37. — Syn.? S. Jaapianum P. Magn. 1914. — Cellulis perdurantibus singulis vel pluribus (2-8), 45-60 μ diam., membrana externa nigrescenti-flava, levi, 4 μ circ. crassa, protoplasmate granulato, brunneo, protoplasmatis cellulae hospitalis massa tectis; sporangiis 30-40, rotundatis, 12 μ circ. diam.; zoosporis incognitis.

Hab. in pilis foliorum et caulium Symphyti officinalis [Borraginaceae] quos saepe deformat, prope Lipsias Saxoniae in Germania (CORRENS). — Verisimiliter eodem est ac Synch. Jaapianum P. Magn. in Jaap, Ann. Mycol., XII, 1914, p. 2, quoque in Symph. off., ex Rödgen Germania.

2. Synchytrium incrassans Maire, Bull. Soc. H. N. Afrique du Nord, 3373 1917, p. 1917, p. 135. — Celdiis saepe in basi pilorum evolutis, compositis, e luteolo atro-brunneis, punctiformibus, frequenter ag-

gregatis, 1-3 cellulas matricis continentibus; cellulae matrices cysti fere repletae, contentu e hyalino rufo-brunneo, granuloso, demum saepe subnullo, membrana valde incrassata, e hyalino dilutissime brunneola; cellula matrice stratu unico cellularum valde incrassatarum hyalinarum obvoluta; cystis in cellulis matricibus singulis, episporio levi, crassiusculo, 7 µ cr., e hyalino fulvo guttulis numerosissimis farcto praeditis.

Hab. in foliis vivis Thrinciae tuberosae [Compositae], in Mauretania, Afr. sept.

3. Synchytrium globosum Schröt. — Syll. VII p. 288 — v. alpestre Maire, 3374 Bull. Soc. Bot. Fr. LVII (1910) p. CLXVI. — Gallis plerumque compositis e pallido brunneolis, cellula matrice unica semper hyalina v. subhyalina praeditis; chronizoocysta (cysta) in cellulis matricalibus singula rarius bina, episporio levi, 1-2 μ cr. e hyalino dilute brunneolo, tenui induta, globosa v. subglobosa, 30-60 μ diam. contentu griseo-hyalino farcta.

Hab. in caulibus foliisque Phyteumatis, prob. pauciflori [Campanulaceae], in pascuis alpinis Passo del Ladro, Alpimarittime. — A typo differt gallis dilutius coloratis et cystae tunica tenuiore nempe  $1.2~\mu$  cr. nec  $3.4~\mu$ .

4. Synchytrium Bromi Maire, Bull. Soc. H. N. Afr. du Nord, 1917, 3375 p. 134. — Cystis in maculis foliorum atro-purpureis gregatim evolutis, subglobosis, ellipsoideis v. e mutua pressione plus minusve compressis, levibus, brunneis, pellucidis, 75-260 \* 60-250, 1-nucleatis, membrana usque ad 12-15 μ cr. praeditis.

Hab. in foliis vivis Bromi madritensis juvenilis [Graminaceae], in Mauretania, Afr. sept.

5. Synchytrium Marrubii G. Tobler, Synchytrien, in Arch. Protistenk. 3376 XXVIII (1913) p. 221. — Synchytrium? — Farlow in Bot. Gazette X (1885) p. 240. — Gallis? minutis, 60-75 μ diam., non prominentibus; soris perdurantibus? in cellulis matricalibus hypertrophicis.

Hab. in foliis Marrubii vulgaris [Labiatae], in America bor. — Species omnino dubia.

6. Synchytrium Ulmariae K. Falck et Lagerh., Ark. f. Bot. XII (1912) 3877 n. 5 p. 4 (comm. 24 apr. 1912, edita 3 dec. 1912); S. Ulmariae Tobler, Archiv. Protistenk., XXVIII, 1913, p. 191, tab. 13 fig. 50. — Verrucis minutissimis amphigenis sed plerumque hypophyllis nervicolis, 60-100 μ diam.; sporangiis solitariis, raro 2-3 in quoque

cellula, globosis v. globoso-ellipsoideis, 40-60  $\mu$  diam.; exosporio levi, flavo contentu hyalino.

Hab. in foliis Spiraeae Ulmariae [Rosaceae], Fjällnäs, Älfkarleö, Runmarö, Stora Rör, in Suecia.

7. Synchytrium aurantiacum G. Tobler, Synchytrien, in Arch. Protistenk., XXVIII (1913) p. 186, tab. 12 fig. 44. — Tuberculis compositis, aggregatis, pomiformibus, aurantiacis, vertice depresso, 300 μ circ. diam.; soris perdurantibus, globosis, 150 μ circ. diam., contentu oleoso flavo; sporangiis et zoosporis non visis.

Hab. in foliis caulibusque, praecipue in nervis foliorum Salicis repentis [Salicaceae], prope Münster Westf. in Germania (G. TOBLEE).

8. Synchytrium cellulare Davis, Parasit. Fungi Wisconsin IV, Trans. 3379 Wisc. Ac. of Sc. etc. XIX, 1919, P. II, p. 681, cum icon. — Gallis foliicolis amphigenis, quandoque petiolicolis, 130-240 × 110-150, e cellula magna centrali et minoribus periphaericis (30-40 μ cr.) circumdata; cellula centrali quandoque horizontaliter divisa, infra sporangifera; sporangiis 30 v. ultra, flavis, e sphaeroideis ellipsoideis, 18-26 × 15-22; sporis persistentibus e globosis ellipsoideis, brunneis, 50-90 × 40-80.

Hab. in foliis petiolisque Boehmeriae niveae [Urticaceae], prope Devils Lake, Wisconsin, Amer. bor.

RHIZOPHIDIUM Schenk — Syll. VII p. 298, IX p. 362, XI p. 248, XIV p. 443, XVI p. 390, XVII p. 512, XXI p. 842.

Rhizophidium Eudorinae Hood, Proc. Birm. N. H. Soc. XII (1910) 3380 p. 45 et Trans. Br. Mycol. Soc., V (1916) p. 236. — Mycelio filamentoso, tenui protoplasmatico, simplici, zoosporangiis supra cellulam hospitem evolutis, phialiformibus, longe rostratis, hyalinis, 20-35 μ longis, 10-17 μ latis; zoosporis copiosis, ovoideis, 2 μ circ. diam., 1-ciliatis, guttula oleosa minuta refringente praeditis; sporis duraturis sphaeroideis, asexualiter orientibus, externis, membrana crassa, hyalina, sparse minuteque granulosa, guttula oleosa ampla intus repletis, 10-16 μ diam.

Hab. parasitice in coloniis semoventibus Eudorinae elegantis, Lutton Park, Warwichshire, Britannia.

2. Rhizophidium monosporum Maire, Bull. Soc. Linn. Normandie, ser. 3381 6., II, p. LXVIII (1910). — Nomen nudum.

Hab. in granulis pollinicis Pini, in horto botan Caen, Gailia-

- MITOCHYTRIDIUM Dang., Bull. Soc. Mycol. de Fr.,1911, p. 200.— Sporangia singula in cellulis matricis nidulantia, finiculoso-ramosa, non septata, hinc inde ostiolo cylindraceo praedita. Zoosporae rotundatae, uni-guttulatae uni-flagellatae. Hyphae rhizoideae hinc inde a superficie sporangiorum orientes. Sporae perdurantes (? oosporae) sphaeroideae, crasse tunicatae.
- Mitochytridium ramosum Dang, l. c. p. 202 fig. 1. Sporangiis 60 μ 3382 cr., sabdichotomice divisis et 100 μ et ultra longis; zoosporis 4-5 μ diam. longe flagellatis; ? oosporis sphaeroideis crasse tunicatis, granuloso-farctis, 25-30 μ diam., solitariis vel 2-3 congregatis et filo rhizoideo conjunctis.

Hab. parasitice in Desmidiacea, Docidium Ehrenbergii, in paludosis prope Ségrie Sarthe, Gallia.

- CHYTRIDIUM A. Br. Syll. VII p. 304, IX p. 358, XI p. 250, XIV p. 446, XVII p. 513, XXI p. 844.
- 1. Chytridium alarium Al. L. Kibbe, Puget Sound Mar. Sta. Pub. 1., 3383 1916, pp. 221-226, tab. 39-40. Nomine nobis tantum nota.
- PHYSODERMA Walhr. Syll. VII p. 317, IX p. 363, XI p. 250, XIV p. 447, XVII p. 513, XXI p. 846.
- Physoderma Narcissi (Poir.) Sacc. et Trott., Cladochytrium (Physo-3384 derma) Narcissi Poirault, Bull. Assoc. Nat. de Nice, 1915 p. 7 (extr.). Maculis violaceo-brunneis, limitatis, sporis totum folii parenchyma implentibus, brunneis, subglobosis v. breviter ellipsoideis, subinde uno latere compressis, 26-30 μ diam.

Hab. in folis Narcissi Tazzetta [Amaryllidaceae], in Alp. Marit. — Valde affine Clad. Muscari Poirault, Syll. XXI p. 486.

Physoderma Zeae-Maydis Shaw in Syd. et Butl., Ann. Mycol. X, 3385 1912, p. 245, fig. 2. — Maculas planas elongatas fuscas efformans; mycelio intra cellulas crescente; sporangiis perdurantibus pluribus in cellulis, fulvis, globosis v. ellipsoideis, 20-27 \* 18-24.

Hab. in nervo medio foliorum Zeae Maydis [Graminaceae], Duars, Bengala, Indiae or. (E. J. Butler).

3. Physoderma Maydis Miyabe in A. Ideta, Handb. of Plant Dis. Ja- 3386 pan 1909, Ed. 4., P. I, p. 114, fig. 119. — Cladochytrium Maydis Miyabe in Ideta, l. c. Ed. III, 1903, p. 75 (nomen nudum). — Tanaka, Mycologia 1922, p. 84. — Maculis numerosis parvis, orbicularibus, ellipsoideis v. linearibus, saepe confluentibus, brunneis v. fuligineis, ad marginem pallidioribus centro obscurioribus; spo-

rangiis ovato-ellipsoideis v. globosis, obscure brunneis, 24-26 

> 22-24.

Hab. in foliis culmisque nec non in vaginis bracteisque Zeae Maydis, et valde noxia, Japonia. — Verisimiliter est Physoderma Zeae-Maydis Shaw, ex Indiae or.

4. Physoderma Myriophylli (Rostr.) Vesterg., Rostr. et Lind, Dan. Fung. 3387 p. 52, f. 1 et t. I f. 5; Cladochytrium Myriophylli Rostr., Rev. Mycol. 1905 p. 164, Ferd. et Wingle, Mycol. Not. II p. 305 c. icon.— Tuberculis caulicolis, crassis, 1 cm. diam.; sporis creberrimis, tubercula implentibus, ellipsoideis, raro sphaeroideis, v. polyedricis,  $25-40 \approx 20-25$ , tunica brunneo-flava, 4  $\mu$  cr.

Hab. in caulibus vivis Myriophylli verticillati [Halorrhagidaceae], in Daniae pluribus locis. — Sporae partim ut perdurantes habendae, partim ut sporangia considerandae, in quibus sporae minutae, hyalinae, 6 μ diam. evolvuntur.

5. Physoderma Ornithogali R. Maire, Schedae Myc. Bor.-Afr. in Bul. 3388 Soc. Hist. Nat. Afrique du N., t. 10, 1919, p. 137. — Maculis rufobrunneis, ambitu flavo-virentibus, amphigenis, subtumidis, oblongis, 3-8 mm. longis; cystis (chronizoocystis) in cellulis parenchymatis, rarius in cellulis epidermidis evolutis, plerumque 2-4 in quadam cellula, subhemisphaericis, 24-30 × 20, episporio rufo-brunneo, 2 μ crasso, taxe foveolato praeditis, contentu achroo, guttulis oleosis numerosis praedito, farctis.

Hab. in foliis vivis Ornithogali narbonensis [Liliaceae], in Mauretania, Africa bor. (R. MAIRE). — Ph. Urgineae (Pat.) Maire proximum sed pluribus notis diversum.

6. Physoderma deformans Rostr., Rev. Mycol. 1886, p. 96 et in Rostrup-Lind, Dan. Fungi, p. 51, t. I f. 1. — Flores hypertrophicos, subcarnosos et monstrosos efficiens, stâminaque sterilia rubentia v. virentia et pistilla monstrosa incrassata reddens; sporis intercellularibus globosis v. crasse ovoideis 12-16 µ diam., membrana crassa pallide flava; mycelio copiose evoluto, parcissime septato.

Hab. in floribus, caulibus, foliisque vivis Anemones nemoros a e [Ranunculaceae], in Dania. — Plantae affectae diutius vivae persistunt.

Physoderma Calthae Bucholtz, Mat. Mycol. ins. Osiliae (Rossia), 3390 p. 6. — Acervulis gregariis, rotundis v. ellipsoideis, 1-2 mm. diam., epidermide tectis, cinnamomeis; sporis (sporangiis?) ellipsoideis, 30-40 × 23, intus granulosis, guttulis oleosis praeditis; episporio ochraceo 2,5 μ circ. cr.

Hab. in caulibus foliis fructibusque Calthae palustris [Ranunculaceae], in paludosis, Nawska ins. Osiliae, Rossia.

8. Physoderma bohemicum Sacc., Ann. Mycol. XII, 1914, p. 295. - 3391 Gregarium, punctiforme, brunneolum; sporangiis perdurantibus intracellularibus, ellipsoideis 35-40 × 23-33, dilute fulvis, episporio levi, subtili, 1-1,5 µ cr. præditis, junioribus hyalinis pluriguttatis.

Hab. in foliis petiolisque vivis Calthae palustris, Nechanice, Bohemia (E. BAUDYS). - Affine Phys. vagante et Phys. Magnusiano, dignoscitur sporangiis perdurantibus 1-paucis in quaque cellula matricis, paullo majoribus, et dilute fulvis. Sed verisimiliter non satis diversum a praecedenti.

UROPHLYCTIS Schröt. - Syll. VII p. 303, XVII p. 515, XXI p. 849.

1. Urophlyctis Hymenoxidis Speg., Mycet. Argent. VI, Anal. Mus. Nac. 3392 Buenos Aires, XXIII p. 4 (1912). — Soris pusillis, parenchymate foliorum pallescentium innatis, sparsis, rufescentibus ex oogoniis paucis, hyalinis, globosis, 60-80 µ diam. efformatis; oosporis solitariis subglobosis, saepius inferne umbonatis, subpiriformibus, 50 µ circ. diam., tunica ferruginea levi tenui vestitis, endoplasmate nubiloso hyalino repletis.

Hab. in foliis vivis Hymenoxidis anthemoidis [Compositae], in pratis circa La Plata, Argentina.

2. Urophlyctis Lathyri Björn Palm, in Svensk. Bot. Tidskr. Bd. 5., 3393 1911, p. 356, cum icon. - Pustulae in caulibus et in pagina superiore foliorum conspicuae, subglobosae. Sporangiis perdurantibus forma generis, brunneolis, plerumque 40-45 µ, in cellulis nidulantibus et eas maximas efficientibus. Sporangiis ephemeris nullis.

Hab. in foliis caulibusque deformatis Lathyri montani [Leguminosae], Ulriksdal prope Stockholm, et Lathyri pratens i s, Stora Rör, Öland, Scandinavia.

3. Urophlyctis ? linaricola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 3394 Buenos Aires XXIII p. 3, c. ic. (1912). — Tumores subglobosos. 5-10 mm. diam. botryose aggregatos, ex albo rubescentes vel viridulos ad collum radicis inducens; sporis majusculis, lateritiis, levibus, globosis, 75-150 µ diam., in capsula e cellulis parenchymaticis fusiformiter transformatis, 50-60 × 12-15, dense minuteque corrugatis compositis singulatim nidulantibus.

Hab. ad basin caulium Linariae canadensis |Scrophulariaceae], in dunis Ibicuy, Entre Rios, Argentina.

## Fam. 4. Saprolegniaceae Pringsh. \*)

PYTHIOPSIS De Bary - Syll. IX p. 346.

1. Pythiopsis Humphreyana Coker, Mycologia, 1914, p. 292, t. 148. — 3395 Hyphis sterilibus angustis, parce ramosis circ. 11·14 μ cr. ad insertionem sporangiorum v. oogoniorum validioribus, maturis mox subcolabescentibus; sporangiis variabilibus, sphaeroideis, ovoideis, piriformibus v. elongatis apice papillato dehiscentibus et e basi proliferantibus et tunc subcymosis; sporis piriformibus biciliolatis, 8-9 μ cr.; oogoniis conformibus et tunc praecipue juventute e sporangiis aegre distinguendis, apicalibus v. e latere subcymosis, magnitudine valde variabilibus 33-89 μ v. plerumque circ. 43 μ, tunica levi subaequali 1,4 μ cr. praeditis; oosporis plerumque singulis raro binis rarissime quaternis, 24-40 μ diam., tunica 2 μ circ. cr.; antheridiis breviter clavatis, pedicellis basi oogoniis valde approximatis v. subdistantibus, raro diclinis, singulis, binis v. quandoque plurimis juxta oogonium orientibus et apicibus oogonio adnátis.

Hab. Chapel Hile, Amer. bor. - Pyth. cymosae proxima.

SAPROLEGNIA Nees — Syll. VII p. 268, IX p. 345, XI p. 244, XIV p. 453, XVII p. 518, XXI p. 851.

1. Saprolegnia variabilis Minden, Krypt. Fl. Brandenb. V p. 524 (1912).— 3396 Fasciculis densis, hyphis pro ratione tenuibus, parce vel vix ramosis, mollibus constitutis; sporangiis primariis fusiformi-clavatis vel sphaeroideis, copiosissimis, 80 × 60 vel 70 × 57 circ., secundariis valde variabilibus, saepe in serie dispositis; oogoniis sphaeroideis, rarius plus minusve elongatis, 50-70 μ diam vel 90 × 70 vel etiam 60 × 40, membrana crassa praeditis, indistincte punctulatis; oosporis 1-15, plerumque 4-8, sphaeroideis, 23-26 μ diam.; antheridiis non visis.

Hab. ad ova Formicarum terra uda diu servata, Hamburg in Germania. — Hyphae interdum in segmentis plus minusve co-

<sup>\*)</sup> De nonnullis mycetibus aquaticis, cnfr. M. v. Tiesenhausen, Beitr. z. Kenntnis d. Wasserpilze der Schweiz. Inaug. Diss. Univ. Bern, 1911 et Archiv. f. Hydrobiologie u. Planktonkunde, Plön, Bd. VII, H. 2, 1912, pp. 261-308, 24 icon.

piosis divisis, ex quibus partim sporangia, partim oogonia, partim gemmae oriuntur. — Affinis S. torulosae et S. moniliferæ, forsitan identica cum S. rhactica Maurizio, quae imperfecte descripta.

 Saprolegnia mixta De By. — Syll. VII p. 270 — var. Asplundii E. 3397 Gäumann, Botaniska Notiser, 1918, p. 155. — A typo differt oosporis minoribus, modo 15-21, fere 16-19 μ latis.

Hab. prope Airavare, Suecia bor. (E. ASPLUND).

3. Saprolegnia lapponica E. Gäumann, Botaniska Notiser, 1918, p. 156.— 3398 Caespitulis mollibus, 1-2 cm. a muscis distantibus; hyphis gracilibus, erectis, parce ramosis, 8-14 μ crassis; zoosporangiis diam. fere paullo maiore partibus terminalibus hypharum; antheridiis absentibus; oogoniis lateralibus, breviter pedunculatis vel sessilibus, pedunculo saepe tubiforme in oogonium prolifero; diam. fere 45-75 μ; foraminibus distinctis, impar frequentibus (v. c. 6-18 in oogoniis ejusdem hyphae); oosporis globosis vel late ellipsoideis, fulvis, 19-31, fere 21-24 μ diam., 1-18 in eodem oogonio nascentibus.

Hab. ad terram muscosam sub Nuolja monte, Lapponia, Europa bor. — Saprol. Thurreti De B. proxima nec non S. esocinae et bodanicae.

4. Saprolegnia monoica De By. — Syll. VII p. 268 — var. glomerata 3399 Tiesenhausen, Beitr. Wasserpilze Schw., 1912, p. 277 fig. 6-8. — Caespitulis tenuibus, laxis, 1 cm. lat.; ramis lateralibus incrassatis, iterum divisis, varie curvatis et glomerulum parvum formantibus; sporangiis generis, interdum ex conidiis formatis, parvis piriformibus v. globosis; oogoniis 37-80 μ diam. pedicellis aeque ac ramulis sterilibus inaequaliter curvatis, saepe nodosis pluries ramosis; oosporis 22-24 μ diam., 1-23, typice 3-6 in quoque oogonio, antheridiis androgynis v. etiam diclinis.

Hab. in laculo, Riffelberg pr. Zermatt, Helvetiae.— var. vexans A. J. Pieters, Bot. Gaz., LX, p. 489 (1915).— A typo differt quia oogonia in muscis aliisque substratis culta non efformat; oogonia in decoctione pisi leucina et levulosio additis tantum evoluta. — Hab. inter a l g a s e Sukey Lake, Michigan, Amer. bor. — var. turíosa Minden in Krypt. Fl. Brandenb. V p. 516 (1912).— Oogoniis membrana valde incrassata, luteola praeditis, facillime perspicuis, plerumque in ramis brevibus, racemosis, dimidium oogonii diametrum saepe vix attingentibus, rarissime in hyphis ipsis insidentibus, 40-80 μ diam., plerumque 70 μ circ.; antheridiis ad quoque oogonium 1-2, e clavato-incurvis usque cylindraceo-elongatis, ramis brevissimis e stipite oogonii, rarissime ex hyphis ipsis

nascentibus insertis; oosporis plerumque 15-30, raro minus, sphaeroideis, levibus, 20-25  $\mu$  diam.

Hab. ad fructus Mali et ad caules Visci, putrescentes, in Brandenburgia, socia Aphanes. — Sec. Cl. E. Gäumann (in Botaniska Notiser 1918, p. 153), varietas haec ut spec. habenda et tunc Saprol. turfosa (v. Mind.) Gaum. vocanda, cuius synonima haec sistunt: Sapr. paradoxa Peters. 1909, nec Sap. paradoxa Maurizius 1899.

5. Saprolegnia stagnalis Tiesenhausen, Beitr. Wasserpilze Schw. 1912, 3400 p. 276. — Caespitulis laxis, 2 cm. lat., sporangiis plerumque mediocribus e gr.  $260 \times 29$ ,  $500 \times 20$ ,  $720 \times 45$ , sed etiam  $80 \times 20$ ; sporangiis secundariis adnexis; oogoniis in hypha primaria et ejus ramulis, rarius et secundi ordinis acrogenis, interdum quoque intra vacuum sporangium v. binato seriatis; pedicello oogonii brevi et incurvo; oogoniis  $25-80~\mu$  diam., margine punctatis; oosporis typice concentricis  $12-22.5~\mu$  lat. rarius 32.5~15, in quoque oogonio 1-12, saepius 1-2; antheridiis semper diclinis.

Hab. in stagno, alt. 1920 metr., pr. St. Moritz, Engadina sup.—Ab affini Sapr. dioica pluribus notis dignoscenda.

6. Saprolegnia Kaufmanniana A. J. Pieters, Bot. Gaz., LX p. 488 (1915) 3401 tab. 21 fig. 5-7. — Habitu vegetativo S. feraci simili, hyphis firmis, rigidis; sporangiis liberis illis S. feracis omnimo similibus; gemmis globosis, ovoideis vel irregularibus, plerumque singulis, raro catenulatis; oogoniis majusculis ramulis plus minusve elongatis insidentibus, vel etiam intercalaribus, sparsis, ovatis vel clavatis, rarissime globosis, 100-250 × 70-80, membrana tenui levi haud foveolata; oosporis 3-4 in oogoniis minoribus, in ceteris copiosioribus, usque ad 20-30, 30 μ circ. diam. protoplasmate granuloso eguttulato farctis; antheridiis plerumque praesentibus, diclinis, e clavato incurvis vel irregularibus, saepe binis vel pluribus pro quoque oogonio.

Hab. inter algas, laboratorio Universitatis cultas, Michigan, Amer. bor.

ACHLYA Nees — Syll. VII p. 274, IX p. 346, XI p. 245 et 658, XVII p. 518, XXI p. 852.

1. Achlya asterophora Minden, Krypt. Fl. Brandenb. V p. 549 (1912) 3402 fig. 2 c (p. 520). — Fasciculis spissis, ex hyphis usque ad 100  $\mu$  crassis; sporangiis ramorum sporangiferorum minus crassis; oogoniis terminalibus in ramis brevibus botryose dispositis, sphaeroi-

deis, spinis majusculis, cavis, conico-acutatis, interdum furcatis,  $11-15~\mu$  longis, plerumque dense distributis ornatis,  $45-50~\mu$  diam. (sine aculeis); antheridiis saepius per paria dispositis, rarius singulis, curvatis, clavatis, extremitate auteriore pariete oogonii adpressa; oospora typice unica (rarissime binis) sphaerica,  $30-35~\mu$  diam., matura guttulis oleosis variae magnitudinis excentrice coadunatis.

Hab. ad ramos aqua immersos, prope Hamburg, Germania. — Cum Achlya racemosa var. spinosa Cornu, cujus descriptio imperfecta, comparanda.

2. Achlya ocellata Tisenhausen, Beitr. Wasserpilze Schw., 1912 p. 287 3403 fig. 14. — Caespitulis, laxis, 3 mm. lat.; hypha primaria basi 175 μ cr., apice acuta; hyphis sterilibus saepe furcatis v. patenti-ramosis; sporangiis generis; oogoniis in hyphis plus v. minus incrassatis racemose digestis interdum intercalaribus; pedicello rarius usque 62 μ longo, plerum oogonium vix acquante, interdum nullo; oogoniis globosis, subinde piriformibus, 40-118 μ long., membrana levi, punctata; oosporis 17-25 μ diam., guttula refringenti ocellatis, 5-20 in quoque oogonio; antheridiis ad ramulos 5-8 μ crassos, androgynis v. diclinis.

Hab. in lacubus pr. Campfér, in Engadina superiori.

3. Achlya radiosa Maurizio, Beitr. z. Biol. d. Saprolegnieen in Ztschr. 3404 f. Fischerei etc., Mitt. d. deutsch. Fischerei-Ver., VII Jahrg., p. 2., Berlin 1899, p. 1-66; Tiesenhausen, l. c. p. 283, fig. 10-13. — Syn. f. Achl. decorata Peters., f. A. racemosa var. spinosa Cornu. — Hyphis mycelicis crassis, basi quandoque usque 140 μ cr. apicem versus usque 60 μ; sporangiis plerumque pleurogenis subcylindraceis 240-23; oogoniis sparsis v. dense racemosis plus minus longe pedicellatis, pedicellis 15-95 × 10-12,5 v. 50-80 × 7-10, globosis 55-63 v. usque 75 μ diam., emergentiis mamillato-acuminatis 12-20 μ altis; parietibus oogonii plus minus intense flavis; antheridiis e pedicello oogonii 1-2, v. pluribus efformatis, 10-13 μ cr., in pedicello proprio circ. 5 μ cr. vix articulatis.

Hab. ad frustula organica dejecta, Helvetia (Berna, Engadina) alioque.

4. Achlya De Baryana Humphrey. — Syll. XIX p. 6, XXI p. 854 — 3405 var. intermedia Minden, Krypt. Fl. Brandenb. V p. 545 (1912). — A typo differt ramulis lateralibus saepe ex pedicello oogoniali nascentibus, valde elongatis et ramosis; membrana oogoniorum indistincte punctulata vel etiam omnino levi.

Hab. in stagnis prope Lüneburg, Germania et diu ad ova Formicarum culta.

5. Achlya paradoxa W. C. Coker, Mycologia, 1914, p. 283, t. 146 f. 3406 1-6. — Planta delicata; hyphis rectis, angustis, ramosulis, latioribus 37 μ cr., nonnulis etiam angustioribus et circ. 10-15 μ cr.; sporangiis semper copiosis, anguste clavulatis v. cylindraceis, apicem versus rotundatis et 55 μ diam. ibique distincte breviterque papillatis; sporangiis secundariis subfasciculatis nonnulis contentu destitutis; sporis laxe polystichis, omnibus ciliatis; oogoniis apice ramulorum lateralium insertis quandoque ad basim hypharum primariorum quandoque intercalaribus; tunica levi aequali; oosporis plerumque binis, saepe quaternis raro singulis v. octonis, 22-37 μ diam. (plerumque 30); antheridiis semper praesentibus et pluribus juxta oogonium, breviter clavatis, ad apicem ramulorum tenuiorum saepe circinnantibus circa stipitem oogonii ortis.

Hab. Chapel Hill, Amer. bor.

6. Achiya giomerata W. C. Coker, Mycologia, 1912, p. 325, t. 79. — 3407 Hyphis ramosis subobtusis brevibus 40-45 μ cr. sursum sensim tenuatis et circ. 12 μ cr.; zoosporangiis cylindraceis et subinde irregularibus saepe papilla oblique dehiscentibus; oogoniis copiosis sphaeroideis verrucis irregularibus obtusis omnino tectis; oogoniis singulis v. racemosis; oosporis singulis v. rarius binis in quoque oogonio, 15-23 μ diam.; antheridiis (plerumque deficientibus), clavato-cylindraceis in apice ramulorum ex eodem glomerulo et singulis v. pluribus quoque oogonio adnexis.

Hab. in aquis, Lone Pine Spring et Lone Pine Hill, prope Chapel Hill, North Carolina, Amer, bor.

7. Achlya Klebsiana A. J. Pieters, Bot. Gaz., LX, p. 486 (1915) tab. 21 3408 fig. 1-4. — Hyphis rigidis, medio incrassatis, aliis latis, ramosis, 10-15 mm. et ultra longis intermixtis; sporangiis cylindraceis sporangia secundaria saepe efformantibus; oogoniis in ramulis brevibus lateralibus diametrum oogonii aequantibus insidentibus, raro in apice hypharum elongatarum, nunquam intercalaribus, globosis vel late ovoideis, levibus, oosporis 4-10, excentricis, 25 μ diam.; antheridiis origine diclinis oogoniis pro parte adpressis nunquam clavatis nec oogonia involventibus; gemmis catenulatis, ex articulis hypharum vesiculosis interdum breviter ramosis vel papillatis efformatis.

Hab. inter algas in Michigan, Amer. bor.

- BLEPHAROSPORA Petri, Rend. Accad. Linc. 1917, p. 297. Mycelium diu unicellulare dein (cultura) pluricellulare intercellulare et intracellulare, parasiticum. Corpuscula (zoosporangia) sphaeroidea dein piriformia, ovalia v. citriformia, papillata, contentu granuloso, mox pluries partito et sporas (zoosporas) gignente. Sporae sphaeroideae hinc conico-productae, primitus immotae, dein sub luce et tepore mobiles et cilia longa bina gerentes.
- 1. Blepharospora cambivora Petri l. c. et in Ann. R. Ist. sup. forest. naz. 3409 vol. III, 1918 Extr. p. 3 et seqq., cum fig. et tab. IV.— Characteres generis, zoosporangia primum sphaeroidea dein ovoidea, piriformia v. citriformia, juniora 18-25 × 12-25, matura 60-75 × 40-54; zoosporae numero 8-10 usque ad 22 in quoque zoosporangio, modo immobiles subsphaeroideae papillatae, modo mobiles et ciliis binis praeditae, 12-15 μ diam., cilia praelonga filiformia sensim tenuata sinuosa, zoosporâ duplo triplove longiora.

Hab. in stratu medio (cambio) trunci Castaneae vescae cui, teste auctore, affert morbum dell'inchiostro, in Italia. Zoosporae ubi fixantur cilia amittunt et germinant.

**PYTHIUM** Pringsh. — Syll. VII p. 270, IX p. 347, XI p. 244, XIV p. 455, XVI p. 895, XVII p. 518, XXI p. 854.

Pythium conidiophorum M. Jokl, Oesterr. bot. Ztschr. 67., 1918, 3410 p. 33, tab. I (absque diagn.). — Mycelio hinc inde ramoso, continuo, 2-6,3 μ cr., in cellulis plus minus copiose evoluto, et hinc inde e parietibus cellularum exeunte et hyphis lateralibus usque 100 μ long. emittente; sporangia nulla, sed conidia sphaeroidea 8-11, v. usque 20 μ diam., extus efformante, maturitate secedentia et hyphas mycelicas 1-2-3 emittentia; oogonia vix evoluta, verisimiliter omnino intercellularia, sphaeroidea 6,3-15,9 μ diam. (sed matura?); antheridia non visa.

Hab. in cellulis Spyrogyrae dubiae, communis, variantis, in Lacu Scutari, Albania. — Pyth. dictyospora et gracile verisimiliter affine.

APHANOMYCES De Bary — Syll. VII p. 276, XVI p. 393, XXI p. 854.
1. Aphanomyces helicoides Minden, Kryptog, Fl. Brandenb. V p. 559 3411 (1912). — Fasciculis albis, 1 cm. usque latis, ex hyphis 5-8 μ crassis constitutis; sporangiis apicalibus, filiformibus zoosperis monoseriatis continentibus, sporangiis secundariis paucis cymose dispo-

sitis; oogoniis terminalibus, raro intercalaribus, ramis brevibus fultis, plus minusve sphaericis, pariete levi, erassa, 23-38  $\mu$  diam.; antheridiis majusculis, saepe longe cylindraceis, plerumque plurimis ad quoque oogonium eumque ramis lateralibus demum brunneis et deciduis spiraliter involventibus; oospora singula, sphaerica, 23-27  $\mu$  diam. guttulis oleosis, non semper bene distinctis, lateraliter positis.

Hab. simul cum aliis Saprolegniaceis, et diu ad ovos Formicarum culta, Hamburg, Germania. — Ab A. laevi De By. cui certe affinis, differt ramulis lateralibus antheridiorum oogonia vel etiam hyphas longe spiraliter involventibus.

#### APODACHLYA Pringsh. - Syll. XI p. 245.

1. Apodachlya punctata Minden, Krypt. Fl. Brandenb. V p. 586 (1912), 3412 fig. 15 (p. 580). — Mycelio longe filiformi, fasciculis fluctuantibus albis efformante, ex hyphis ramosis, longe segmentatis constituto; sporangiis terminalibus atque e gemmatione sympodiale lateraliter nascentibus, clavatis, ovoideis, piriformibus vel subglobosis, collo plerumque lateraliter inclinato; sporis hibernantibus apice hypharum elongatarum vel in ramis lateralibus segmentorum brevium insidentibus, sphaeroideis, membrana crassa bistratosa, strato interno regulariter minute punctato.

Hab. ad ramos et caules putrescentes,. Breslau et Hamburg in Germania.

2. Apodachlya pirifera Zopf. — Syll. XI p. 245 — var. macrosporangia 3413 Tiesenhausen, l. c. p. 298, fig. 19. — A typo recedit hyphis 5-15  $\mu$  (nec 4-10  $\mu$ ), articulis 70-430  $\mu$  long., sporangiis 37-50  $\mu$  long. (nec 12-24  $\approx$  12-20); conidiis 25-33  $\mu$  diam. (nec 16  $\mu$ ).

Hab. ad acus Piceae excelsae in aqua dejectos, Hinterburgsee Stockhornkette, « Berner Oberland »; 1525 m. alt., Helvetia.

3. Apodachlya brachynema (Hild.) Pringhs. — Syll. VII p. 265 (Leptomitus) — var. major Tiesen., l. c. p. 298 fig. 20. — A typo differt hyphis 6-13  $\mu$  cr. (nec 4-6  $\mu$ ), articulis 15-537  $\mu$  long.; sporangiis majoribus 40-52  $\mu$  (nec 12-22  $\mu$ ).

Hab. ad terram humosam udam prope Zollikofen, Bern, Helvetia.

## RHIPIDIUM Cornu. - Syll. VII p. 268, XIV p. 454.

1. Rhipidium Thaxteri Minden, Krypt. Fl. Brandenb. V p. 600 (1912).— 3415 Cellula başali usque ad 800 \( \mu\) diam. et ultra, interdum monstrose discoidea, lobis usque ad 200  $\mu$  latis, filis rhizoidalibus copiosis substrato penetrantibus, hyphis e cellula basali ortis 1,5 tantum quam ea longis, 7-11  $\mu$  crassis, in aqua fluctuantibus, non segmentatis sed basi constrictis; sporangiis elongato-ellipsoideis, 50-55  $\times$  20-35, saepe e gemmatione sympodiali ortis; oogoniis majusculis, irregulariter sphaericis vel piriformibus, apice tenuatis et late rotundatis, saepe pedicellatis, 57-62  $\times$  45-57 (sine pedicello); antheridiis majusculis, 50-70  $\times$  7-11, irregulariter clavatis, tota longitudine oogonio adnatis, in ramis tenuibus lateralibus, irregulariter ramosis e cellula basali inter oogonia orientibus sitis; oospora unica, majuscula, sphaeroidea, crasse tunicata, superficie areolata, 40-50  $\mu$  diam.

Hab. ad fructus et ramos Alni, in ins. Waltershof flum. Elbae in Germania. — Caracteres fructificationis quasi medii inter Rhipidium et Sapromyces.

#### BLASTOCLADIA Reinsch. — Syll. XI p. 245, XIV p. 456.

1. Blastocladia strangulata J. E. Barrett, Bot. Gaz. LIV (1912) p. 353, 3416 tab. 18-20. — Axi primario ex ovato cylindraceo, basi filamentis rhizoideis copiosis, ramosis instructo, sursum copiose dichotomo vel subdichotomo-ramoso, ad basim ramorum pseudoseptato; zoosporangiis ovatis vel sphaeroideis 50-63 × 40-52, papillas dehiscentes paucas ferentibus; zoosporis ovoideis, 12 × 8, cilio plerumque simplici ornatis; sporangiis hibernantibus rotundatis, basim versus gradatim angustatis et truncatis, 45 × 35, zoosporas foventibus

Hab. ad Aphides in aqua, Ithaca N. Y., America boreali.

2. Blastocladia rostrata Minden, Kryptog. Fl. Brandenb. V p. 604 3417 (1912). — Axi primario ex hyphis 1-1,5 mm. longis, cylindricis, non vesciculosis, superne dichotomo-vel irregulariter ramosis, ramis iterum copiose divisis, apice non capitato-inflatis constituto; hyphis sterilibus nullis; sporangiis plerumque subspiraliter dispositis, e cylindraceo fusoideis, 70-100 × 20-30; sporis hibernantibus ellipsoideis, basi lata, apice rostrato, 40-53 × 25-30, membrana crassa sed tenuissime punctulata, bistratosa, maturitate strato externo deciduo et spora strato interno extus verruculoso tantum cincta.

Hab. ad fructus putrescentes aqua immersis, in ins. Waltershof flum. Elbae prope Hamburg, Germania.

Blastocladia prolifera Minden, Kryptog. Fl. Brandenb. V p. 606 3418 (1912). — Axi primario 170 × 80, plerumque late cylindraceo, apice in filamentis plus minusve copiosis varie distributis scisso, qui

sporangia copiosa ferunt; sporangiis cylindraceis, saepe curvatis, lata basi adnexis, apice attenuatis ibique obtuse papillatis, 80-150 ≥ 15-30, post evacuationem zoosporarum pluries proliferantibus; sporis hibernantibus non visis.

Hab. ad fragmenta plantarum emortuarum, Dover Elbe prope Hamburg, Germania.

- RHEOSPORANGIUM Edson, Journ. Agricult. Research, v. IV, n. 4., p. 291, (1915). - Mycelium aereum v. aquaticum bene evolutum, non septatum, ramosum. Multiplicatio aquatica, per zoosporas et per oosporas. Prezoosporangia terminalia e mycelio plus minus inflato et contorto efformata. Sporangia tenuiter tunicata, e apice lacerato presporangia erumpentia et zoosporas efformantia.
- 1. Rheosporangium aphanidermatus Edson, l. c. p. 291, tab. XLIV- 3419 XLVIII (1915). - Mycelio vegetativo albo, in aqua hyalino, primum continuo ad fructificationem septatum, ramosum, minute granuloso, saepe cursus protoplasmatis exibenti; hyphis junioribus 2,8-7,3 μ cr. plerumque 4.6 μ sed ad fructificationem crassioribus. Presporangiis e simplicibus et irregulariter clavatis usque ramosis 50-1000 μ long., 4-20 μ latis; sporangiis membrana flexibili subinconspicua, ex apice erumpentia, subsphaeroidea, magnitudine variabilia. Zoosporis e sporangiis ruptis exeuntibus, plano-convexis, vacuolo unico centrali praeditis, 12 > 7 crassis, infra in parte concava cilia 2 inaequalia praeditis. Oogoniis terminalibus, sphaeroideis 22-27 µ diam.; antheridiis terminalibus v. intercalaribus, suborbicularibus, demum cylindraceis v. late clavatis, 10-14 > 9-11. Oosporis singulis levibus v. inaequalibus circ. 17-19 µ cr.

Hab. ad terram, in radicibus plantulae Betae vulgaris et Raphani sativi, America bor.

ALLOMYCES Butler, Phycomyc., in Ann. of Bot. XXV 1911 p. 1027 .--(Etym. allos et myces fungus). - Fungus arbusculaeformis, cellula basilari unica rhizoidibus subtilibus ramosis suffulta praeditus, supra cellulam breviter furcatus, indeque in ramulos angustos fertiles radiatim divergentes v. cellulae perdurantes partito; ramuli septati, sympodialiter v. dichotome divisi. Sporangia acropleurogena, solitaria v. catenulata, ovoidea, papillis evacuationis munita; zoosporae singulatim emergentes oblongae v. ellipsoideae, 1-ciliatae, initio amoeboideae, inonoplaneticae. Sporae perdurantes ovoideae,

crasse tunicatae. Germinatio non visa. Membranae omnes cellulosa carentes.

1. Allomyces arbuscula Butl., l. c., cum tab. — Cellula basilari 100-200 3420 \$\infty 60-100\$; ramuli fertiles 250 \$\infty 15-25\$; sporangia 40-70 \$\infty 30-40\$, utrinque retundata v. truncata, papillis 1-4 evacuationis munita; cellula perdurans, singula, terminalis basi truncata apice rotundata, 40-60 \$\infty 30-45\$, exosporio crassiusculo, brunneo.

Hab. in aqua (non stagnante), Pusa et Poona, Ind. or., ad Muscas etc. emortuas. — Habitus quasi Saprolegniae.

- 200PHAGUS Sommerstorff, Oesterr. Bot. Zeitschr. LXI, 1911, p. 361 n. 10, p. 12 extr. Hyphae cylindricae, rectae, rigidae, typice simplices et continuae, lateraliter ramulos breves perpendiculariter insertos gerentibus. Fructificatio distincta nulla adhuc observata. Aquaticus, inter algas nidulans, animalcula rotatoria ramis suis brevibus captans.
- 1. Zoophagus insidians Sommerst., l. cit., tab. 5-6; Mirande, Bull. Soc. 3421 Myc. de Fr., t. 36., 1920, p. 47, cum icon. Hyphis cylindricis, rectis, aequalibus, 6-7 μ diam., rigidis, typice simplicibus, continuis vel, ubi plasmate elapso, septis curvulis partitis, ramulos breves laterales plus minusve perpendiculariter insertos gerentibus; ramulis breviter cylindraceis, subaequalibus, 20 × 3, apice substantia granulosa valde refringente repletis, animalcula (Rotatoria) captantibus et in eorum corpore irregulariter abunde crescentibus. Fructificatio nulla distincte visa.

Hab. in aqua inter Cladophoras, eisque saepe adhaerens, prope Gratwein in Styria (SOMM.) et in horto bot. Gratz, Austria (PALLA).

- JARAIA Nêmec, Zur Kenntnis der niederen Pilze. VI. Eine neue Saprolegniacee Bull. internat. Acad. Sci. Bohême 18. Praga 1913, p. 18-31.— Zoosporangia formae variabilis, in eminentias ostiolares cylindraceas plerumque 2 vel 3-6, hinc inde producta. Antheridium late in oogonio penetrante. Mycelium radicicolum parasiticum intercellulare.
- Jaraia Salicis Nêmec, l. cit., cum tab. et icon.— Zoosporangiis immersis parvis, magnitudine et forma variabilibus, numerosis, ex hyphis consequenter formatis; oogoniis collo ostiolari destitutis et tunc oosporis ob lacerationem oogonii emissis. Fructificatio in stratu meristemali ad apicem radicum.

Hab. in apicibus radicalibus hypertrophicis Salicis pur pure a e, aqua immersis, in Bohemia.

- ANISOMYXA Nêmee, Zur Kenntnis der niederen Pilze V., in Bull. Int. Ac. Sc. Bohême, 18., Praga 1913, p. 18-31.— Status vegetativus intracellularis plasmodiiformis juventute uninucleatus, demum multinucleatus, soros zoosporangiferos efformans; zoosporae uniciliatae. Gen. Rhizomyxae Borzi proximum et Sorolpidio etiam nonnullis notis affine.
- 1. Anisomyxa Plantaginis Nêmec, 1. c., cum tab. et icon.— Zoosporan-3423 giis rotundatis, autumno parvis, 5,8 × 5,8-7,2, pseudoparenchymam simulantibus; aestate majoribus et magnitudine variabilibus 4,5-6 × 10,5-15; zoosporis rotundatis 1,5 × 1,5-1,8.

Hab. in radicibus Plantaginis lanceolatae, Bohemia.

Genus incertae sedis et nomine nobis tantum notum.

1. Enterobryus compressus R. Thaxter, Bot. Gazette 69., 1920, p. 24, 3424 tab. V fig. 47-52. — E hyalinus pallide sordide flavescens; cellula basali magna et crasse tunicata, parte distali latiori, 500-850  $\times$  28-35, recta v. saepe basi leniter curvata; pedicello e cellula basali bene definito, leniter brunneo flavescenti; cellulis superioribus articulatis, cellulis singulis articulis e quarto v. quinto sensim ad apicem latioribus et subcompressis (singulis circiter 8  $\mu$  altis, 35  $\mu$  latis, 18  $\mu$  crassis), omnibus spora solitaria repletis.

Hab. in regione anali Passali sp., Dominica, America.

## Fam. 4. Peronosporaceæ De Bary

CYSTOPUS Lév. — Syll. VII p. 233, IX p. 340, XI p. 242, XIV p. 458, XVI p. 396, XVII p. 519, XXI p. 858.

1 Cystopus austro-africanus (H. et P. Syd.) Sacc. et Trott., Albugo 3425 austro-africana H. et P. Sydow, Ann. Mycol. X, 1912, p. 437. — Soris amphigenis, plerumque epiphyllis, rotundatis v. ellipticis minutis, 0,5-1 mm. diam., flavidis; conidiophoris late clavatis, hyalinis, 35-42 × 16-18; conidiis hyalinis v. dilute flavidis, ubique aequaliter tenuiterque tunicatis, globosis v. subglobosis, 14-20 μ diam.; terminalibus majoribus 20-24 × 16-21, membrana 1-2 μ cr.; oospo-

ris in contextu foliorum evolutis, globosis, castaneo-brunneis, ca. 50 µ diam., papillis minutis aequaliter denseque obsitis.

Hab. in foliis Aizoi rigidi [Aizoaceae], Humewood Port Elizabeth, Cape Prov., Africa austr. (E. M. Doldee). — Cyst. Lepigoni proximus sed differt oosporis obscurioribus et conidiis minoribus.

2. Cystopus Eurotiae (W. Tranzsch.) Sace. et Trott., Albugo E. Tranz-3426 sch., Mycoth. Ross. fasc. III-IV, an. 1911, n. 101. — Sori hypophylli, rotundati, sparsi, rarius confluentes, albidi. Conidiophori clavulati, circa 30 × 15. Conidia subglobosa vel late ovata, 16-22 16-18 μ, membrana hyalina, tenui, ad medium intus annulo leniter incrascato, non semper bene conspicuo, cincta. Oosporae foliicolae, globosae, brunneae, maturae fere opacae, 39-55 μ diam., a superficie visae verrucis magnis, irregularibus, angulatis, reticulatim confluentibus separatis, tectae; sub his verrucis episporium minute denseque everruculosum apparet (oosporae juniores tantum verruculosae sunt); in sectione optica episporium e baculis brunneis dispositis constructum apparet, quae bacula verrucis claviformibus, in parte superiore dilatata dilutius coloratis et extra plus minus concavis superata sunt.

Hab. in foliis vivis Eurotiae ceratoidis (L.) C.A.M. [Chenopodiaceae], in prov. Ufa, Rossiae orientalis, prope Durassowo, (SEREBRIANIKOW).

3. Cystopus Evansii (H. et P. Syd.) Sacc. et Trott., Albugo Evansii 3427 H. et P. Sydow, Ann. Mycol. X, 1912, p. 437. — Soris folicolis v. saepissime caulicolis, rotundatis v. in caulibus oblongis, circ. 1/2-1,5 mm. long.; conidiophoris oblongo-clavatis, 35-45 × 14-17, hyalinis; conidiis subglobosis, ovatis v. oblongis, hyalinis, 16-28 × 13-20, membrana ad medium annulatim incrassata; oosporis nondum visis.

Hab. in foliis caulibusque Nemesiae sp. [Scrophulariaceae], Hoogfonteim, Ladybrand, Africae austr. (C. P. VAN DER MERWE).

\*) PHYTOPHTHORA De Bary. — Syll. VII p. 237, IX p. 341, XVI p. 396, XXI p. 859.

<sup>&</sup>quot;) Cfr. Wilson, Monogr. Phytopht., in « Mycologia » 1914, p. 54. ROSENBAUM, Studies of the genus Phytophthora, in Journ. of Agricult. Research, Washingt., Febr. 1917, v. VIII, p. 233-276, tab. 71-77.

## Conspectus synopticus et systematicus specierum plurimarum gen. Phytopthorae, sec. Cl. Rosenbaum in l. c.

I. Oogonia antheridio plerumque lateraliter disposito praedita

Typ. PH. CACTORUM

- A. Papilla apicali non prominenti sed lata et depressa; conidia circ. 39,86 × 25,33, cosporae 29,5 µ circ. cr. Ph. Syringae
- B. Papilla apicali prominenti.
  - 1. Chlamydosporae nullae; moda conidiorum 32-35 \* 25-26.
  - \* Oosporarum moda 29-86, diam. circ. 30-22

Ph. Fagi

- \*\* Oosporarum moda 26, diam. circ. 27
- Ph. Cactorum
- 2. Chlamydosporae copiosae; moda conidiorum 37-38 × 29-30.
- \* Chlamydosporarum moda 28,86 × 13,15; conidiorum ratio circ. 1,25

Ph. Nicotianae

- II. Oogonia antheridio plerumque basi disposito praedita Typ. Ph. Phaseoli
  - A. Conidiorum ratio ultra 1,75.
    - 1. Conidia circ.  $43,64 \times 23,39$  chlamydosporae circ.  $31,15 \mu$  diametro Ph. parasitica
  - B. Conidiorum ratio infra 1,75.
    - 1. Conidia parva, infra 30 × 20.
      - \* Oospora in culturis copiosa, antheridia adsunt
- Ph. Phaseoli
- \*\* Oospora in culturis nulla, v. pauca et tunc antheridiis destituta v. antheridio indefinito praedita
- Ph. infestans

- 2. Conidia magna, ultra 30 20.
- \* Papilla apicali non prominenti sed lata et depressa Oosporae 35,78 μ circ. cr.; conidia circ. 47,93

Ph. erythroseptica

\*\* Papilla apicali prominula; oosporae 32,42 μ cr. conidia circ. 44,65 ≈ 29,45

Ph. Arecae

III. Antheridia v. situ ejusdem hucusque ignoti; chlamydosporae praesentes v. nullae

Typ. PH. FABERI

- A. Chlamydosporae latae, diam. ultra 35 µ.
  - Chlamydosporae diam. circ. 38,98 praeditae; conidiorum ratio 1,47
     Ph. Faberi
- B. Chlamydosporae parvae, diam. infra 35 μ.
  - Chlamydosporae diam. circ. 32,89 praeditae; conidiorum ratio 1,28.
     Ph. Jatrophae
- 1. Phytophthora Agaves Gandera, Mem. y Rev. Soc. Cient. « Ant. Al- 342? zate » t. 25, 1908-1909 [1909], pp. 293-305, icon. et tab.

  Hab. in foliis Agaves [Amaryllidaceae], in Mexico. Amer. bor.

2. Phytophthora Allii K. Sawada, Mycologia 1917, p. 249 (Ex Rep. Stat. 3429 Agricult. Taiwan (Formosa) p. 77, tab. 1-2. — Mycelio byssino albo; hyphis filiformibus, tenui-tunicatis, hyalinis, demum septulatis, valde ramosis, 3-8 μ cr., cellulas matricis penetrantibus; haustoriis non visis; conidiophoris filiformibus simplicibus v. pseudo-dichotome ramosis, 140-480 × 4-6; conidiis terminalibus globosis v. ovoideis v. limoniformibus, hyalinis, papillatis, papilla 5-10 μ long., 50 × 36, basi non v. crasse 1-septatis, demum 15-60 zoosporas gignentibus; oogoniis sphaericis, 20 μ d. monosporis; oosporis sphaericis, hyalinis v. pallide melleis 16-17 μ d., tunica 0,5-1,5 μ cr.; antheridiis 8-18 × 10-14.

Hab. in foliis et floribus Allii fistulosi, in Ins. Formosa (K. SAWADA).

3. Phytophthora palmivora (Butl.) Butler, Scient. Rep. Agric. Res. Inst. 3430 Pusa, 1918-1919 [1919], p. 82.

Ita vocandum est Pythium palmivorum Butl., Syll. XXI p. 855.

4. Phytophthora terrestris Sherbakoff, Phytopath. VII (1917) p. 127, 3431 cum ic. — Mycelio primo continuo deinde septato; conidiis fere terminalibus, aliquando intercalaribus, plerumque ovoideis apice papillatis sed valde variabilibus, 36-46 × 24-35; zoosporis late ellipsoideis, asymmetricis, lateraliter 2-ciliatis, 9-11 μ diam., quiescentibus globosis; chlamydosporis vulgaribus, plerumque globosis, 30-40 μ diam.; oogoniis sphaerioideis, 19-24 μ diam., basi per antheridium subglobosum penetratis; oosporis globosis 18-21 μ diam.

Hab. parasitice in fructibus Lycopersici esculenti, in truncis Citri et in caulibus Lupini, nec non aperte in solis humosis, Florida, Amer. bor. — Culta in agaro farina Maydis composito, colonias peculiariter cristatas efficit.

Phytophthora Nicotianae Breda de Haan, Med. int's Lands Plan-3432 tentain 15., 1896, 107 p., 1 tav. — A Ph. omnivora de Bary praecipue biologice diversa quia tantum in Nicotiana viget.

Hab. in foliis caulibusque nec non in radicibus Nicotianae Tabacci, cui valde noxia, in ins. Sumatra, Java, Borneo

6. Phytophthora Melongenae K. Sawada, Mycologia 1917, p. 249 (Ex 3433 Rep. Agric. Stat. Taiwan (Formosa) p. 59 tab. 1-2. — Hyphis continuis, cellulas matricis penetrantibus, valde ramosis, maturis septatis; hyphis aereis plerumque simplicibus, praelongis, 4-8 μ cr., basi contorta inflata v. brevi-ramosa; haustoriis nullis; conidiophoris vix diversis, brevioribus 80 × 3-5; conidiis sphaericis ovoideis 23-72 × 20-48, plerumque 42 × 33, apice papilla hemisphaerica

3.5  $\mu$  alta praeditis, usque ad 40 zoosporas gignentibus; zoosporis ovoideo ellipsoideis 10-11  $\approx$  8 biciliatis; chlamydosporis flavido brunneis, sphaericis, 25-42  $\mu$  d.; oogoniis sphaericis 18-23  $\approx$  20-24, monosporis; oosporis globosis 17 21  $\mu$  d., tunica 2  $\mu$  cr., hyalina v. brunneola; antheridiis subsphaericis 12-16  $\approx$  10-14.

Hab. parasitica in fructibus Solani Melongenae, in Ins. Formosa (K. Sawada).

7. Phytophthora crythroseptica Pethyb., On the rotting of Potato to 3434 bers, in Scienc. Proc. R. Dublin Soc. n. s. XXIII p. 529-565, t. 42-44 (1913). — Mycelio ut Ph. infestantis, sed conidiis majoribus brevius papillatis; ovoideis v. obpiriformibus (ob subapicali constrictionem), 30 × 20; gametis ex hyphis separatis, primitus minus distinctis; oogoniis 36 μ diam. tunica hyalina praeditis; oosporis 29-30 μ diam. hine multo minoribus quam Ph. infestantis.

Hab. in tuberibus Solani tuberosi, quae colore rubro tinguntur in Europa et Amer. bor.

8. Phytophthora Caricae K. Hara, Morbi arbor., fr. Jap. p. 432, fig. 57.— 3485 Mycelii hyphis ramosis angustis, haustoriis carentibus; conidiophoris aeque ac mycelio 3-4  $\mu$  cr.; conidiis limoniformis, oblongis v. ovoideis,  $40\text{-}87 \approx 15\text{-}25$ , hyalinis, papilla prominenti auctis, germinatione 8-10 zoosporas emittentibus; oosporis ignotis, chlamydosporis globosis,  $20\text{-}30~\mu$  diam., granulosis, flavidis.

Hab. in fructibus Fici Caricae, Prov. Musashi, Tokyo Japoniae.

9. Phytophthora parasitica Dastur., Mem. Dep. Agr. India Bot. Ser. V, 3436 1913 p. 226 tab. 1-X. — Maculis amphigenis, orbicularibus, centro arescentibus, dilute umbrinis, anulatis, solitariis v confluentibus; mycelio intermatricali ex hyphis inter-et intracellularibus, primo continuis tandem septatis 3-9 μ cr. constantibus; haustoriis sparsis, digitatis v. subglobosis, raro ramosis, sporangiophoris, 100-300 μ longis; sporangiis terminalibus, interdum intercalaribus v. lateralibus, plerumque ovoideis, subinde globosis, 25-50 × 20-40; zoosporis 8-12 × 5-8; sporis perdurantibus globosis, flavidis, 20-60 μ d., membrana crassa, levi; oogoniis et antheridiis in vitro cultis; oogoniis intercalaribus v. lateralibus, globosis, levibus v. rugosis, melleis 18-25 (medie 23,8) μ diam. pedicellis per antheridia penetrantibus; oosporis globosis, 15-20 (medie 18,6) μ diam., membrana crassa, mellea, levi.

Hab. in foliis seminibusque Ricini communis et Sesami indici, in India orient.

- STIGEOSPORIUM West, Ann. of Bot. XXX n. 118, p. 357 (1916), v. XXXI n. 121, p. 95 cum icon. (1917). Mycelium ramosum ex hyphis inter-et intracellularibus continuis rarissime septatis constans; haustoriis numerosis, extremitatibus in ramulis radiatis valde dissectis; sporis perdurantibus solitariis plerumque globosis raro subglobosis et cat., membrana crassissima irregulariter intenseque colorata. Differt a *Phytophthora* cui arcte affine, habitu symbiotico qua de causa nulla conidia normalia producuntur.
- Stigeosporium Marattiacearum West, l. c., cum icon. et tab. III.— 3437
   Hyphis primum hyalinis demum flavo-brunneis vacuatis 1-12 μ cr.; sporis v. intercalaribus v. terminalibus plerumque globosis 32 45 μ diam., raro subglobosis v. ovoideis v. piriformibus; exosporio tenuissimo hyalino levi, mesosporio crassissimo, 6 μ crassitudine, minute punctulato flavo irregulariter intenseque colorato, endosporio tenue 2,5 μ cr.

Hab. in radicibus subterraneis symbiotice in mycorrhizis, Marattiacearum orientalium e gen. Angiopteris, Archangiopteris, Kaulfussia, Marattia, Asia orientali, Australasia, Zeylania.

PERONOSPORA Corda — Syll. VII p. 244, IX p. 342, XI p. 243, XIV p. 458, XVI p. 397, XVII p. 521, XXI p. 862.

Peronospora Pulmonariae E. Gäumann, Bull. Soc. neuchâtel. Sc. Nat. 3438 t. XLIII, 1919, Extr. p. 8, fig. 3; Mitt. Naturf. Ges. Bern. 1919 [1920], p. 179. — Caespitulis mollissimis, griseo-albis, difficile visibilibus, tergum foliorum nonnulla parte subtegentibus; conidiophoris singulis e stomatibus exeuntibus, 200-400 μ altis, trunco 9-12 μ crasso, basi leviter tumida; conidiis paene globosis, hyalinis, 21-36, fere 25-30 longis, 20-32, fere 24-29 μ latis. Longitudine media 28,03 μ, latitudine media 26,46 μ. Oosporis ignotis.

Hab. in foliis vivis Pulmonariae officinalis, Gallia septentrionali. — Per. Echinospermi Sw. proxima.

2. Peronospora Speculariae E. Gäumann, Bull. Soc. neuchâtel. Sc. Nat. 3439 t. XLIII, 1919, Extr. p. 6, fig. 4-5; Mitt. Naturf. Ges. Bern, 1919 [1920], p. 179. — Caespitulis mollibus, griseo-flavis, totum tergum foliorum subtegentibus; conidiophoris singulis vel plurimis e stomatibus exeuntibus, 250-450 μ altis, trunco 1/3 -2/3 totius altitudinis efficienti, 7-13 μ crasso; ramis 5-9 ies dichotome ramosis, valde curvatis; furcis terminalibus 5-30 μ longis, rectangulis, saepe litterae graecae sigma similiter curvatis; conidiis fere hyalinis,

3441

3442

late ellipsoideis, 9-23, fere 12-18  $\mu$  longis, 8-20, fere 11-16  $\mu$  latis. Longitudine media, 15,94  $\mu$ , latitudine media 13,47  $\mu$ . Oosporis singulis in foliis marcidis, 27-31  $\mu$  diam., episporio laevi, 6-8  $\mu$  crasso. Oogoniis e membrana persistenti, saepe plicata, formatis, 45.50  $\mu$ diametro.

Hab. in foliis vivis Speculariae Speculi veneris (L.) DC., (in Gallia meridionali), nec non Speculariae hybridae (L.) DC. (in Gallia septentrionali). - Per. Phytheumatis proxima sed pluribus notis distincta.

3. Peronospora helvetica Gäumann, Mitt. der Naturf. Ges. Bern, 1919 3440 [1920], p. 178.

Hab. in Cerastio latifolio, in Alpibus Helvetiae.

4. Peronospora tornensis Gäumann, l. c. p. 181.

Hab. in Cerastio alpino, Scandinavia, Islanda. 5. Peronospora septentrionalis Gaumann, l. c. p. 181.

Hab. in Cerast. trigyno Vill., Helvetia, Norvegia, Islanda.

6. Peronospora.media Gaumann, Mitt. Naturf. Ges. Bern, 1919 [1920], 3443 p. 183.

Hab. in Stellaria media, Europa, Asia occ.

7. Peronospora litoralis E. Gäumann, Mitt. Naturf. Ges. Bern, 1918 3444 (1919), p. 62, fig. 14.—Synon.? Peron. farinosa Fr. p. p. - Caespitulis densissimis hypophyllis effusis; conidiophoris 3-16, 250-700 µ altis, dichotomice ramosis, infra 9-16  $\mu$  cr.,  $^{\tau}/_{2}$ - $^{3}/_{4}$  alt. totius arboris, furcis terminalibus rectangulis rectis v. saepius leviter sigmoideo-incurvatis, 10-60 μ long.; conidiis flavidulis late ellipsoideis, plerumque  $28-32 \times 19-23$  (usque  $20-37 \times 10-26$ ); oosporis copiosis in foliis marcescentibus, brunneis, levibus, raro rugosis, 29-42 μ diam., oogoniis 35-60 μ.

Hab. in foliis Atriplicis litoralis et verisimiliter etiam A. hastatae, Suecia Europa bor.

8. Peronospora variabilis E. Gaumann, Mitt. Naturf. Ges. Bern., 1918 3445 (1919), p. 62 fig. 11, 1919 (1920) p. 184. — Syn. P. Chenopodii Caspary 1854, P. effusa var. major Casp. 1855 p.p. et var. manshuriae Naoumoff 1914, P. epiphylla (Pers.) Lagerh. 1891 p. p. - Caespitulis densis hypophyllis plus v. minus effusis; conidiophoris 1-9, 150-450  $\mu$  altis, 2-7-dichotomice ramosis, trunco  $^1/_{\text{s}}\text{-}^2/_{\text{s}}$  alt. totius arboris, 8-12 µ cr.; furcis terminalibus sigmoideo-incurvatis, 20-60 µ long.; conidiis variabilibus, ellipsoideis fere papillatis, flavidulis, plerumque  $25:30 \times 16\cdot 20$  (usque  $17\cdot 40 \times 12\cdot 28$ ). — Oosporis non visis.

Hab. in foliis Chenopodii albi, Wabern prope Bern Helvetia Europa, Nord-et Sud America, Asia.

9. Peronespora effusa Grév. — Sacc., Syll. VII p. 256 — var. manshu-3446 rica Naoumoff, Bull. Soc. Mycol. Fr. 1914 p. 72, t. I f. I. — Differt a typo atque a var. minor Caspary conidiis, fere globosis vel late ellipsoideis, 20-22 μ diam. vel 18-21 × 21-24, et conidiophoris minus curvulis, paulo ramosis, ramis extimis brevioribus, saepius 6 μ raro 9-12 μ, rectis curvulisve.

Hab. in foliis juvenilibus Chenopodii albae, in prov. Austro-Ussuriensi (Rossiae-Orient.).

10. Peronospora Boni Henrici E. Gäumann, Mitt. Naturf. Ges, Bern, 3447 1918 (1919), p. 63 fig. 1². — Syn. Peron. nivea Unger 1847 p. p. — Caespitulis hypophyllis densissimis plus minus effusis, brunneo-violaceis; conidiophoris singulis v. plurimis (1-3), 200-400 μ altis, 4-9-dichotomice ramosis, trunco 7-10 μ cr. ½-2/3 alt. totius arboris; furcis terminalibus rectangulis, leviter curvatis, 20-65 μ long.; conidiis globosis v. latissime ellipsoideis, leviter brunneo-violaceis, plerumque 24-28 × 22-25 (usque 17-34 × 16-31). Oosporis non visis. Hab. in foliis Chenopodii Boni Henrici, Robberge prode Cortaillod, Helvetia.

11. Peronospora Chenopodii ficifolii Sawada, Agr. Exp. Sta. Formosa, 3448 Circ. Publ. n: 101, 1916, p. 9, cum icon.; The Formosan Agr. Review n. 155, 1916, p. 29, cum icon.; Mycologia 1919, p. 83. — Maculis hypophyllis pallide griseo-purpuraceis, rotundatis v. irregularibus, 1-27 mm. diam., quandoque late indeterminateque effusis; hyphis intercellularibus, hyalinis, continuis, 7-12 μ cr., haustoriis simplicibus v. apice ramosis, saepe plus minus spiralibus, 10-20 × 3-4; conidiophoris caespitosis, 3-6 raro 7 dichotomice ramosis, ramis omnibus apice incurvatis, 240-500 μ long. 8-14,4 μ cr.; conidiis oblongis v. subellipsoideis, basi papillatis, fuligineis v. cinereis, 26-36 × 17-25; statu oogonico ignoto.

Hab. in foliis Chenopodii ficifolii, Taiwan, Formosa, Japonia.

12. Peronospora Chenopodii glauci E. Gaumann, Mitt. Naturf. Ges. 3449 Bern, 1918 (1919), p. 63. — Caespitulis griseo-violaceis, densis, hypophyllis late effusis; conidiophoris plerumque 3-5 (usque 1-8) 200-450 μ altis, 3-7 dichotomice ramosis, trunco 7-11 μ cr., ½-2/3 alt. totius arboris; furcis terminalibus rectangulis, rectis v. leniter curvatis, 10-35 μ long.; conidiis ellipsoideis, leviter brunneis, variabilibus, raro papillatis, plerumque 26-34 × 16-19 (usque 19-40

× 10-23); cosporis maturis non visis, immaturis 32-40 μ diam.

Hab. in foliis Chenopodii glauci, prope Berolinum, Germania (P. Sydow, Myc. March. 3595).

- 13. Peronospora muralis Gäumann, Mitt. d. Naturf. Ges. Bern, 1919 3450 [1920], p. 184.
  - Hab. in Chenopodio murale, Europa, Amer. austr.
- 14. Peronospora Chenopodii polyspermi E. Gäumann, Mitt. Naturf. Ges. 8451 Bern, 1918 (1919), p. 64. Caespitulis griseo-brunneis, densis, tergum foliorum nonnulla parte tegentibus; conidiophoris 2-9, 350-650 μ alt., 3-7-dichotome ramosis, trunco 7-15 μ cr. fere <sup>2</sup>/<sub>3</sub> <sup>8</sup>/<sub>4</sub> alt. totius arboris, basi saepe leniter tumida; furcis terminalibus rectangulis, curvulis, 8-25 μ long.; conidiis late ellipsoideis, paullo brunneo-violaceis, raro papillatis, plerumque 19-23 × 13-17 (usque 11-27 × 10-24). Oosporis non visis.

Hab. in foliis Chenopodii polyspermi, prope Biel, Helvetia.

15. Peronospora Chenopodii rubri E. Gäumann, Mitt. Naturf. Ges. Bern, 3452 1918 (1919), p. 64. — Caespitulis griseo-violaceis, densis hypophyllis, plus minus effusis; conidiophoris 2-6, 300-700  $\mu$  alt., fere 3-5-dichotomice ramosis, trunco 8-13  $\mu$  cr.,  $^{1}/_{2}^{-2}/_{3}$  alt. totius arboris; furcis terminalibus rectangulis, rectis v. curvulis, 15-50  $\mu$  long.; conidiis ellipsoideis paullo brunneo-v. griseo-violaceis, plcrumque 26-30  $\times$  19-22 (usque 17-37  $\times$  12-31). Oosporis non visis.

Hab. in foliis Chenopodii rubri, prope Berolinum Germaniae (SYDOW, Myc. March. 1534).

16. Peronospora Kochiae E. Gäumann, Mitt. Naturf. Ges. Bern, 1918 3453 (1919), p. 64. — Caespitulis leviter flavis, mollibus, aegre visibilibus; conidiophoris solitariis, 300-500  $\mu$  alt., 5-9 dichotomice ramosis, trunco 6-11  $\mu$  cr.,  $^1/_3$ - $^3/_4$  alt. totius arboris; furcis terminalibus rectangulis, leviter curvatis 10 45  $\mu$  long.; conidiis late ellipsoideis paullo brunneo-violaceis, raro papillatis, plerumque 25-29  $\star$  19-23 (usque 20-36  $\times$  16 28). Oosporis non inventis.

Hab. in foliis Kochiae sedoidis Schr., Nowotscherkask, Rossia merid.-orient. (O. TREBOUX, in Sydow Phycom. et Protom. 333)

17. Peronospora vistulensis Wroblewski, Bull. Acad. Sc. Cracovie, ser. 3454 B, 1915, n. 8-10 p. 243. — Caespitulis densis, depressis, late effusis, totam plantam obtegentibus griseo-violaceis; conidiophoris plerumque caespitose erumpentibus 200-300 μ alt. 8 μ cr., apice 4-8 ramosis, ramis elongatis rectis, ultimis angulum rectum efforman-

tibus, acutis, 12-21 µ long., rigidis v. parum incurvatis; conidiis polymorphis, semper magnis ovoideis elongato-ellipsoideis raro ellipsoideis, obtusis v. parum acutis, griseo-flavescentibus 29-45 × 16-20. Oosporis non visis.

Hab. in Salsola Kali, Ciechocinek Poloniae (ZALEWSKI), Salsola Kali var. Tragus, Soska Kempa prope Warschau Praga (LAPCZYNSKI). — Per. effusae var. majoris Casp. proxima, differt apicibus rectis conidiis majoribus.

8. Peronospora alpestris Gäumann, Mitt. Naturf. Ges. Bern., 1919 3455 [1920], p. 181.

Hab. in Helianthemo alpestre (Jacq.) Dun., Helvetia, Gotlandia.

19. Peronospora Radii de Bary. — Syll. VII p. 254 — var. epiphylla 3456 Poirault, Bull. Assoc. Nat. de Nice, 1915, p. 9 (extr.). — A typo distinguitur conidiophoris aeque violaceis, per stomata exeuntibus, non trans ipsam epidermidem (ut in typo); oosporis non visis.

Hab. in foliis Chrysanthemi Myconis, Cap. d'Antibes, Alp. Marit. Galliae. — In eodem Chrysanthemo occurrit quoque typus in capitulis.

20. Peronospora Alliariae Wasabi E. Gäumann, Beih. Bot. Centralbl., 3457 XXXV, Abt. 1., 1918, p. 129. — Caespitulis densissimis; conidiophoris singulis (†) e stomatibus erumpentibus, 550-650 μ altis, furcis literae « sigma » similiter arcuatis; conidiis late ovoideis 14-27, fere 21-24 μ longis, 13-22, fere 18-21 μ latis, longitudine media 20,42 μ, latitudine media 18,69 μ; oogoniis et oosporis ignotis.

Hab. in foliis Alliariae Wasabi (Maxim) Prantl. — Per. parasiticae affinis.

21. Peronospora Alyssi calycini E. Gäumann, Beih. Bot. Centralbl., 3458 XXXV, 1918, Abt. 1., p. 129, fig. 4. — Caespitulis raris, difficile visibilibus; conidiophoris singulis e stomatibus erumpentibus, 250 μ altis, furcis inaequalibus, fere 20 μ longis forcipi aut literae « sigma » similibus; conidiis ellipsoideis, 16-32, fere 22-27 μ longis, 13-24, fere 16-21 μ latis, longitudine media 24,61 μ, latitudine media 16,69 μ; oogoniis et oosporis ignotis.

Hab. in ramis et foliis Alyssi calycini L.—An huc Alyssym campestre L. addendum sit?

22. Peronospora Alyssi incani E. Gäumann, Beih. Bot. Centralbl. XXXV, 3459 Abt. 1., 1918, p. 130. — Caespitulis densis, tergum foliorum omnino protegentibus; conidiophoris pluribus (3-9) coalitis, gracilibus, 300-1000, fere 500-600 μ altis, furcis brevibus, literae « sigma »

similibus, imperfecte curvatis; conidiis ellipsoideis aut globosis, 14-26, fere 17-22 μ longis, 10-23, fere 16-21 μ latis, longitudine media 19,94 μ, latitudine media 18,22 μ; oogoniis et oosporis ignotis.

Hab. in foliis Alyssi incani L. - Per. parasiticae affinis. 23. Peronospora Arabidis alpinae E. Gäumann, Beih. Bot. Centralbl. 3460 XXXV, Abt. 1, 1918, p. 130, fig. 7. — Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis e stomatibus erumpentibus, 400 μ altis, furcis inaequaliter longis (ramus maior 30-80 μ, ramus minor 20-40 µ), aliquantum curvatis, parte extrema inflexis, conidiis late ellipsoideis, 12-31, fere 21-26 µ longis, 12-28, fere 20-24 μ latis, longitudine media 23,11 μ latitudine media 20,92 μ; oogoniis et oosporis ignotis.

Hab. in foliis Arabidis alpinae L. et A. albidae Stev., Helvetia or. - Per. parasiticae affinis.

24. Peronospora Arabidis glabrae E. Gäumann, Beih. Bot. Centralbl. 3461 XXXV, Abt. 1, 1918, p. 130. - Caespitulis rarissimis, caules et inflorescentias protegentibus, conidiophoris fere singulis e stomatibus exeuntibus, 300-400 µ altis, furcis 30-80 µ longis, literae sigma similiter curvatis; conidiis late ellipsoideis, 12-31, fere 21-27 µ longis, 12-26 fere 21-24 µ latis, longitudine media 23,77 u. latitudine media 21,91 µ; oogoniis et oosporis ignotis.

Hab. Arabidem glabram Bernh. - Peron. parasiticae affinis.

25. Peronospora Arabidis hirsutae E. Gäumann, Beih. Bot. Centralbl. 3462 XXXV; Abt. 1, 1918, p. 130. — Caespitulis densis, in caulibus et foliis expansis; conidiophoris plurimis (1-6) coalitis, 400 µ altis, furcis 30-80 µ longis, literae « sigma » similiter curvatis; conidiis ellipsoideis, 11-23, fere 15-18 \( \mu \) longis, 8-20, fere 11-16 \( \mu \) latis, longitudine media 16,12 μ, latitudine media 13,92 μ; oogoniis et oosporis ignotis.

Hab. Arabidem hirsutam (L.) Scop. et A. arenosam Scop. — Per. parasiticae affinis.

26. Peronospora Arabidis oxyphyllae E. Gäumann, Beih. Bot. Centralbl. 3463 XXXV, Abt. 1, 1918, p. 130. — Caespitulis densis, in tergo foliorum expansis; conidiophoris, 5-8 ies ramosis, singulis vel plurimis (1-8) e stomatibus exeuntibus, 120-300 µ altis, ramis undulatis, furcis literae sigma similiter curvatis; conidiis ellipsoideis, 16-29, fere 21-25 μ longis, 12-23, fere 16-19 μ latis, longitudine media 23,05 µ latitudine media 18,03 µ; oogoniis et oosporis ignotis.

Hab: Arabidem oxyphyllam Greene. — Per. parasiticae affinis.

27. Peronospera Arabidis Turritas E. Gäumann, Beih. Bot. Centralbl., 3464 XXXV, Abt. 1, 1918, p. 130. — Caespitulis raris, in tergo foliorum expansis: conidiophoris singulis e stomatibus exeuntibus, 200-250 μ altis, furcis 30-80 μ longis, literae sigma similiter curvatis; conidiis late ellipsoideis, 11-24, fere 16-20 μ longis, 9-23, fere 15-19 μ latis, longitudine media 19,17 μ, latitudine media 17,32 μ; cogoniis et cosporis ignotis.

Hah. Arabidem Turritam, Helvetia or. - Per. parasiticae affinis.

28. Peronospora Arabidopsidis E. Gäumann, Beih. Bot. Centralbl., 3465 XXXV, Abt. 1., 1918, p. 139, — Syn. Per. parasitica f. Sisymbrii Thaliani Schneid. 1865 in Rabenh. Fungi europ. 1364 — Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis e stomatibus exeuntibus. 400 μ altis, furcis 10-60 μ longis, literae « sigma » similiter curvatis; conidiis parvulis, fere globosis, 9-24, fere 14-19 μ longis, 9-21, fere 13-19 μ latis, longitudine media 16,30 μ, latitudine media 14,50 μ; oogoniis et oosporis ignotis.

Hab. Arabidopsidem Thalianam (L.) Heynhold [Stenophragma Thalianum (L.) Cel].

29. Peronospora Barbareae E. Gäumann, Beih. Bot. Centralbl., XXXV, 3466 Abt. 1., 1918, p. 131. — Caespitulis densissimis, in tergo foliorum expansis; conidiophoris plurimis (2-6) coalitis, 250-300 μ altis, furcis literae sigma » similiter curvatis vel parte ultima inflexis; conidiis globosis, 11-25, fere 14-18 μ longis, 9-18, fere 13-16 μ latis, longitudine media 16,58, latitudine media 14,26 μ; oogoniis et oosporis ignotis

Hab. Barbaream vulgare R. Br.—Per. parasiticae affinis.
30. Peronospora Berteroae E. Gäumann, Beib. Bot. Centralbl., XXXV, 3467
Abt. 1., 1918, p. 131. — Caespitulis rarissimis; conidiophoris singulis e stomatibus exeuntibus, 150-450 μ altis, paullum ramosis, furcis brevibus, irregularibus; conidiis fere globosis, 12-21, fere 16-18 μ longis, 12-20, fere 15-17 μ latis, longitudine media 17,36 μ, latitudine media 16,04 μ; oogoniis et oosporis ignotis.

Hab. Berteroam incanam (L.) DC.— Per. parasiticae affinis.
 31. Peronospora Galimanniana Jaap in E. Gäumann, Beih. Bot. Centralbl. 3468
 XXXV, Abt. 1, 1918, p. 132.— Caespitulis densis, in tergo foliorum expansis; conidiophoris plurimis (2-8) coalitis, 300-500 μ altis, furcis 20-65 μ longis, literae « sigma » similiter curvatis, sed saepe

parte ultima inflexis; conidiis late ellipsoideis, 14-29, fere 19-23  $\mu$  longis, 11-25, fere 14-21  $\mu$  latis, longitudine media 21,31  $\mu$ , latitudine media 17,95  $\mu$ ; cosporis et cogoniis ignotis.

Hab. Berteroam mutabilem DC.—Per. parasiticae affinis.
32. Peronospora Biscutellae E. Gäumann, Beih. Bot. Centralbl., XXXV, 3469
Abt. 1, 1918, p. 131. — Caespitulis rarissimis, in tergo foliorum expansis; conidiophoris gracillimis, e singulis stomatibus exeuntibus, 700 μ altis, furcis 30-80 μ longis, literae « sigma » similiter curvatis; conidiis fere globosis, 11-23, fere 14-19 μ longis, 9-20, fere 13-17 μ latis, longitudine media 17,02 μ, latitudine media 15,69 μ; oogoniis et oosporis ignotis.

Hab. Biscutellam laevigatam L., Helvetia, Bavaria.— Per. paraeiticae affinis.

33. Peronospora Brassicae E. Gaümann, Beih. Bot. Centralbl., XXXV, 3470 Abt. 1., 1918, p. 131; Mitt. Naturf. Ges. Bern, 1919, Heft. V.— Caespitulis raris, in caulibus, foliis et cotyledonibus expansis; conidiophoris fere singulis vel binis e stomatibus exeuntibus, 400 μ altis, furcis literae « sigma » similiter curvatis vel parte ultima inflexis; conidiis leviter ellipsoideis, 12-28, fere 16-22 μ longis, 11-23, fere 16-19 μ latis, longitudine media 19,65 μ, latitudine media 17,42 μ; oogoniis e tunica persistenti formatis singulis in foliis, 35-50, fere 40 μ diam.; oosporis globosis, 25-30, fere 28 μ diam. Hab. Brassicam Napum L., Brass. oleraceam L., Brass. Rapam L. et nonnullas varietates harum specierum.

vensi, Europa, Asia, America. — Per. parasiticae affinis.

34. Peronospora Buniadis E. Gäumann, Beih. Bot. Centralbl., XXXV, 3471
Abt. 1, 1918, p. 132. — Caespitulis raris, in tergo foliorum expansis; conidiophoris plurimis (1-9) coalitis, 300-500 μ altis, furcis 15-80 μ longis, literae « sigma » similiter curvatis; conidiis late ellipsoideis, 16-32, fere 21-26 μ longis, 12-26 fere 19-23 μ latis, longitudine media 22,74 μ, latitudine media 20,30 μ; oogonis et oospo-

nec non in Raphano sativo, Sinapide alba et ar-

Hab. Buniadem orientalem L.—Per. parasiticae affinis.
35. Peronospora Calepinae E. Gäumann, Beih. Bot. Centralbl., XXXV, 3472
Abt. 1., 1918, p. 132. — Caespitulis densis, in caulibus, inflorescentiis et in tergo foliorum expansis; conidiophoris singulis vel plurimis (1-3) e stomatibus exeuntibus, 300-700, fere 400-500 μ altis, furcis 30-80 μ longis, literae « sigma » similiter curvatis; conidiis late ellipsoideis, 12-33, fere 19-24 μ longis, 9-24, fere 16-20 μ latis,

ris ignotis.

longitudine media 22,46  $\mu$ , latitudine media 18,74  $\mu$ ; oogoniis e tunica persistente formatis, 35-60, fere 45-50  $\mu$  diam.; oosporis globosis, 28-37, fere 33-35  $\mu$  diam.

Hab. Calepinam irregularem (Asso) Thellung. — Per. parasiticae affinis.

36. Peronospora Camelinae E. Giumann, Beih. Bot. Centralbl. XXXV, 3473 Abt. 1., 1918, p. 132 fig. 13. — Peronos. parasitica f. Camelinae J. Kühn 1864, in Rabenh. Fungi europ. 790 b. — Caespitulis raris, in caulibus, foliis et siliquis expansis; conidiophoris plurimis (2-3) coalitis, 250-309 μ altis, furcis brevibus, irregularibus; conidiis late ellipsoideis, 17-28, fere 21-24 μ longis, 12-24, fere 18-21 μ latis, longitudine media 22,47 μ, latitudine media 19,25 μ; oogoniis frequentissimis in caulibus, e tunica persistenti formatis; ellipsoideis, 43-58, fere 51-54 μ longis, oosporis globosis, 30-34 μ diam.

Hab. Camelinam sativam (L.) Crantz et probabiliter C. microcarpam Andrrz., Europa, Africa bor.

- 37. Peronospora parasitica (Pers.) De By. Syll. VII, P. 1., p. 249, 3474 p. p. E. Gäumann, Beih. Bot. Centralbl., XXXV, Abt. 1., 1918, p. 133; Mitt. Naturf. Ges. Bern, 1919, Heft V.— Verisimiliter in Capsella tantum vigens (C. Bursa pastoris, C. pauciflora Koch), Europa, Asia, America bor.
- 38. Peronospora Dentariae Rabh.— Syll. VII, I, p. 249, p. p.; Per. con- 3475 ferta Ung. 1847, p. 314 ex p.

Hab. Cardaminem amaram, hirsutam, pinnatam, pratensem, Europa et Amer. bor. — Per. parasiticae affinis.

39. Peronospora Cardamines laciniatae E. Gäumann, Beih. Bot. Centralbl. XXXV, Abt. 1, 1918, p. 133. — Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis e stomatibus exeuntibus, 150-300 μ altis, furcis literae « sigma » similiter curvatis vel parte ultima inflexis; conidiis ellipsoideis 12-28, fere 18-22 μ longis, 11-21, fere 12-18 μ latis, longitudine media 19,70 μ, latitudine media 16,23 μ; oogoniis et oosporis ignotis.

Hab. Cardaminem laciniatam Wood et probabiliter Card. bulbiferam (L.) Crantz. — Per. parasiticae affinis.

40. Peronospora Cheiranthi E. Gäumann, Beih. Bot. Centralbl. XXXV, 3477 Abt. 1, 1918, p. 134. — Per. parasitica f. Cheiranthi Fuck., Fungi rhenani 1501, f. Cheiranthi-cheiri Roumeg. 1884, Fungi gall. exs. 2926. — Caespitulis densissimis, in caulibus, inflorescentiis et foliis expansis; conidiophoris plurimis (1-8) coalitis, 400-500 μ altis, va-

riabilibus, furcis acutangulo-divergentibus vel arcuatis vel undulatis, 15-85 μ longis, 12-24, fere 16-21 μ latis, longitudine media 23-19 μ, latitudine media 18,23 μ; oogoniis et oosporis ignotis.

Hab. Cheiranthum Cheiri L.

41. Peronospora Chorisporae E. Gäumann, Beih. Bot. Centralbl. XXXV, 3478 Abt. 1, 1918, p. 134. — Caespitulis raris, in tergo foliorum expansis; conidiophoris 300-400 μ altis, furcis 40-90 μ longis, literae « sigma » similiter curvatis; conidiis ellipsoideis, 19-29, fere 24-27 μ longis, 17-26, fere 21-24 μ latis, longitudine media 25,14 μ, latitudine media 22,72 μ; oogoniis et oosporis ignotis.

Hab. Chorisporam tenellam DC .- Per. parasiticae affinis.

42. Peronospora Conringiae E. Gäumann, Beih. Bot. Centralbl. XXXV, 3479 Abt. 1., 1918, p. 134. — Caespitulis densis, in tergo foliorum expansis; conidiophoris plurimis (2-3) coalitis, gracilibus, 500-600 μ altis, furcis literae «sigma» similiter curvatis vel parte ultima inflexis; conidiis parvulis, late ellipsoideis, 12-21, fere 14-16 μ longis, 11-15, fere 13-15 μ latis, longitudine media 15,39 μ, latitudine media 13,71 μ; oogonis et oosporis ignotis.

Hab. Conringiam orientalem Dum. — Per. parasiticae affinis.

43. Peronospora Coronopi E. Gäumann, Beih. Bot. Centralbl., XXXV, 3480 Abt. 1., 1918, p. 138; Mitt. Naturf. Ges. Bern. 1919 [1920] p. 179.— Syn. Peronospora Lepidii (Mc Alp.) Wilson 1914 p. p. — Caespitulis densissimis, in tergo foliorum expansis; conidiophoris plurimis (4·6) coalitis, 250-400 μ altis, furcis literae « sigma » similiter curvatis, sed parte ultima rami longioris inflexis; conidiis longe ellipsoideis, mutabilibus, 14-31, fere 21-27 μ longis, 11-24, fere 16-19 μ latis, longitudine media 23,16 μ, latitudine media 18,01 μ; oogoniis et oosporis ignotis.

Hab. Coronopum didymum (L.) Smith (Senebiera pinnatifida DC.), Rep. Argentina, Amer. austr.

44. Peronospora Dentariae macrophyllae E. Gäumann. Beih. Bot. Centralbl. XXXV, Abt. 1., 1918, p. 133. — Caespitulis raris, in tergor foliorum expansis; conidiophoris plurimis (6-7) coalitis, 300-400 μ altis, furcis 30-80 μ longis literae «sigma» similiter curvatis, vel parte ultima inflexis; conidiis ellipsoideis, 16-29, fere 21-26 μ longis, 12-24, fere 18-21 μ latis, longitudine media 23,14 μ, latitudine media 18,81; oogoniis et oosporis ignotis.

Hab. Dentariam macrophyllam Bge. — Per. parasiticae affinis.

45. Peronespera Dipletaxidis E. Gäumann, Beih. Bot. Centralbl. XXXV, 3482 Abt., 1., 1918, p. 134. — Caespitulis rarissimis, in tergo foliorum expansis; conidiophoris singulis e stomatibus exeuntibus, 300-400 μ altis, furcis irregularibus, fere brevibus; conidiis ellipsoideis 12-26, fere 18-21 μ longis, 11-27, fere 15-19 μ latis, longitudine media 18,88 μ, latitudine media 16,52 μ; oogoniis et oosporis ignotis.

Hab. Diplotaxidem tenuifoliam (L.) DO.—Per. para-

siticae affinis.

46. Peronespora Drabae E. Gäumann, Beih. Bot. Centralbl. XXXV, 3483 Abt. 1., 1918, p. 134. — Caespitulis rarissimis, in tergo foliorum expansis; conidiophoris singulis e stomatibus exeuntibus, 300-400 μ altis, furcis fere brevibus, literae « sigma » similiter curvatis vel irregularibus; conidiis parvis, ellipsoideis, 11-24, fere 16-21 μ longis, 9-21, fere 14-18 μ latis, longitudine media 17,64 μ, latitudine media 15,81 μ; oogoniis et oosporis ignotis.

Hab. Drabam carolinianam Walt. et D. nemorosam L. — Per. parasiticae affinis.

47. Peronospora Erophilae E. Gäumann, Beih. Bot. Centralbl. XXXV, 3484
Abt. 1., 1918, p. 135. — Per. parasitica for. Drabae Frank 1877, in Rabenh., Fungi europ. 2346. — Caespitulis densissimis, in toto tergo foliorum expansis; conidiophoris fere plurimis (1-6) e stomatibus exeuntibus, gracilibus, 400 μ altis, literae « sigma » similiter curvatis vel irregularibus; conidiis parvulis, late ellipsoideis, 11 21, fere 13-16 μ longis, 8-18, fere 11-14 μ latis, longitudine media 15,17 μ, latitudine media 13,11 μ; oogoniis et oosporis ignotis.

Hab. Erophilam vernam (L.) E. Mey.

48. Peronospora Erucastri E. Gäumann, Beih. Bot. Centralbl., XXXV, 3485 Abt. 1., 1918, p. 135. — Caespitulis rarissimis, in tergo foliorum expansis; conidiophoris plurimis (2.3) e stomatibus exeuntibus, 300 μ altis, furcis literae « sigma » similiter curvatis vel parte ultima inflexis; conidiis ellipsoideis, mutabilibus, 14-32, fere 17-24 μ longis, 12-23, fere 16-29 μ latis, longitudine media 21,70 μ, latitudine media 17,23 μ; oogoniis et oosporis ignotis.

Hab. Erucastrum Pollichii Sch. — Per. parasiticae af\*finis.

49. Peronospora Erysimi E. Gäumann, Beih. Bot. Centralbl. XXXV, 3486
 Abt. 1., 1918, p. 135. — Per. parasitica f. Erysimi cheiranthoidis
 Thüm. 1872, Fungi austr. 938, f. Erys. repandi Thüm. 1873, l. c. 1135. — Caespitulis densissimis, in caulibus et foliis expansis; conidiophoris fere plurimis (1.8) e stomatibus exeuntibus, 300-600 μ

altis, furcis literae « sigma » similiter curvatis vel irregularibus ; conidiis longe ellipsoideis, 12-26, fere 19-22  $\mu$  longis, 11-21, fere 14-18  $\mu$  latis, longitudine media 20,18  $\mu$ , latitudine media 16,10  $\mu$ ; oogoniis e tunica persistenti formatis, 35-44, fere 37-38  $\mu$  diam., oosporis globosis 29-32  $\mu$  diam.

Hab Erysimum crepidifolium Reich., cheirantoidem L., hieracifolium L. et repandum L.

50. Peronospora Hesperidis E. Gäumann, Beih. Bot. Centralbl. XXXV, 3487 Abt. 1., 1918, p. 135. — Caespitulis rarissimis, in tergo foliorum expansis; conidiophoris fere plurimis (1-6) e stomatibus exeuntibus, 200-250 μ altis, furcis 25-65 μ longis, literae « sigma » similiter curvatis; conidiis magnis, 19-34, fere 24-28 μ longis, 17-28, fere 21-24 μ latis, longitudine media 26,41 μ, latitudine media 22,28 μ; oogoniis et oosporis ignotis.

Hab. Hesperidem matronalem L.—Per. parasiticae affinis.

51. Peronespora Isatidis E. Gäumann, Beih. Bot. Centralbl. XXXV, Abt. 3488 1., 1918, p. 136, fig 22. — Caespitulis densis, in tergo foliorum expansis; conidiophoris singulis vel plurimis (1-4) e stomatibus exeuntibus, 200-250 μ altis, furcis literae « sigma » similiter curvatis vel irregularibus; conidiis ellipsoideis, 14-32, fere 21-26 μ longis, 11-24, fere 17-21 μ latis, longitudine media 22,45 μ, latitudine media 19,33 μ; cogoniis et cosporis ignotis.

Hab. Is a tide m tinctoria m L., Helvetia or. — Per. parasiticae affinis.

52. Peronospora Lepidii sativi E. Gäumann, Beih. Botan. Centralbl., 3489 XXXV, Abt. 1., 1918, p. 136.— Caespitulis densis, in foliis, caulibus et ramis expansis; conidiophoris singulis vel plurimis (1-6 fere 3-4) e stomatibus exeuntibus, 300-500 μ altis, furcis 15-70 μ longis, literae « sigma » similiter curvatis; conidiis late ellipsoideis, 16-28, fere 19-26 μ long. 16-24 fere 18-21 μ lat., long. media 22,34 μ, latitudine media 19,18 μ; oogoniis e tunica persistenti formatis, 40-53, fere 46-50 μ diam., oosporis globosis, 29-41, fere 32-45 μ diam.

Hab. Lepidium campestre (L.), Lep. Drabam L., Lep. latifolium L. (f), Lep. ruderale L. et Lep. sativum L., Europa, Amer. bor. — Per. parasiticae affinis.

53. Peronospora Lepidii (Mc Alp.) Wilson, Mycol. 1914, p. 198 t. 135 3490
f. 1-10. — Peronospora parasitica var. Lepidii Mac Alp., Proc. Roy.
Soc. Victoria, 1895, p. 221. — A P. parasitica et P. Niessleana dif-

fert ramis primariis conidiophororum ascendentibus et non dense capitatis.

Hab. in foliis Lepidii virginici (America bor.), L. ruderali (Australia), et probabiliter etiam in Europa.

54. Peronespora Lepidii virginici E. Gäumann, Beih. Bot. Centralbl. 3491 XXXV, Abt. 1., 1918, p. 136, fig. 23. — Per. Lepidii (Mc Alp.) Wilson 1914, p. 198 p. p. — Caespitulis densis, in tergo foliorum expansis; conidiophoris plurimis (7-9) coalitis, 200 μ altis, furcis literae « sigma » similiter curvatis, sed parte ultima rami longioris inflexis; conidiis longe ellipsoideis, 19-37, fere 24-30 μ longis, 14-24, fere 16-21 μ latis, longitudine media 27,52 μ, latitudine media 18,35 μ; oogoniis e tunica persistenti formatis, 40-52, fere 48 μ diam.; oosporis globosis, 25-42, fere 32 μ diam.

Hab. Lepidium virginicum L. — Peronosp. parasiticae affinis.

55. Peronospora Lunariae E. Gäumann, Beih. Bot. Centralbl. XXXV, 3492 Abt. 1., 1918, p. 136, fig. 24. — Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis vel plurimis stomatibus exeuntibus, 200-600 μ al'is, furcis undulatis vel literae « sigma » similiter curvatis, sed parte ultima utrorum ramorum inflexis, 50-90 μ longis; conidiis magnis, 19-31, fere 24-27 μ longis, 16-21, fere 21-24 μ latis, longitudine media 25,85 μ, latitudine media 21,74 μ; oogoniis et tunica persistenti formatis, 40-75, fere 26-64 diam., oosporis globosis, 29-42, fere 32-35 μ diam.

Hab. Lunariam annuam L. et redivivam L.—Per. parasiticae affinis.

56. Peronespora Matthiolae E. Gäumann, Beih. Bot. Centralbl. XXXV, 3493 Abt. 1., 1918, p. 137. — Per. parasitica f. Matthiolae annuae Roum. 1894, Fungi gall. 3137. — Caespitulis rarissimis, in tergo foliorum expansis; conidiophoris plurimis (3-5) coalitis, 300 μ altis, furcis fere 40-60 μ longis, literae « sigma » similiter curvatis; conidiis late ellipsoideis, 12-24, fere 16-22 μ longis, 9-21, fere 14-19 μ latis, longitudine media 18,93 μ, latitudine media 16,23 μ; oogoniis et oosporis ignotis.

Hab. Matthiolam incanam R. Br. — Europa media.

57. Peronospora Nasturtii aquatici E. Gäumann, Beih. Bot. Centralbl. 3494 XXXV, Abt. 1., 1918, p. 138. — Caespitulis raris, in tergo foliorum expansis; conidiophoris plurimis e stomatibus exeuntibus, furcis irregularibus vel literae « sigma » similiter curvatis; conidiis late ellipsoideis 10·17, fere 11·14 μ longis, 8·13, fere 9·12 μ latis.

longitudine media 20,32  $\mu,$  latitudine media 17,07  $\mu$  ; oogoniis et oosporis ignotis.

Hab. Nasturtium aquaticum (L.) Beck.—Peron. parasiticae affinis.

58. Peronospora Nasturtii montani E. Gäumann, Beih. Bot. Centralbl. 3495 XXXV, Abt. 1., 1918, p. 138.— Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis stomatibus exeuntibus 350-400 μ altis, truncis crassis (15 μ diam.), ramis undulatis, furcis literae « sigma » similiter curvatis; conidiis maximis, 19-36, fere 24-30 μ longis, 16-31, fere 21-27 μ latis, longitudine media 27,81 μ, latitudine media 24,16 μ; oogoniis et oosporis ignotis.

Hab. Nasturtium montanum Wal. — Peron. parasiticae affinis.

59. Peronospora Nesleae E. Gäumann, Beih. Bot. Centralbl. XXXV, 3496 Abt. 1., 1918, p. 137. — Per. parasitica Tul. f. Nesliae Thüm. 1872, Fungi austr. 650, Rabenh. Fungi europ. 794. — Caespitulis densissimis, in toto tergo foliorum expansis; conidiophoris singulis e stomatibus exeuntibus, gracilibus, 180-600 μ altis, furcis 30-60 μ longis, irregulariter vel literae « sigma » similiter curvatis, sed parte ultima longioris rami inflexis; conidiis late ellipsoideis, 12-24, fere 16-19 μ longis, 11-19, fere 14-17 μ latis, longitudine media 16,98 μ, latitudine media 15,65 μ; oogoniis e tunica persistenti formatis, frequentissimis in foliis veteribus, 32-49, fere 35-38 μ diam., oosporis globosis, 24-32, fere 27-29 μ diam.

Hab. Nesleam paniculatam (L.) Desv. — Europa med. 60. Peronospora Roripae islandicae E. Gäumann, Beih. Bot. Centralbl. 3497 XXXV, Abt. 1., 1918, p. 137 fig. 27: — Per. Lepidii (Mc Alp.) Wils. 1914, p.p. — Caespitulis densissimis, in tergo foliorum expansis; conidiophoris plurimis (3.6) e stomatibus exeuntibus 250-400 μ altis, furcis rectangulis, paene rectis, 10-40 μ longis; conidiis parvis, 11-23, fere 14-19 μ longis, 9-19, fere 13-16 μ Iatis, longitudine media 16,62 μ, latitudine media 13-79 μ; oogoniis et oosporis ignotis.

Hab. Roripam islandicam (Meder) Schinz et Thellung et B. silvestrem (L.) Besser. — Per. parasiticae affinis.

61. Peronospora Sisymbrii officinalis E. Gäumann, Beih. Bot. Centralbl. 3498 XXXV, Abt. 1., 1918, p. 139, fig. 34.— Syn. P. parasitica f. Sisymbrii Schneid. 1864, Winter 1871, in herb.—Caespitulis densis, in siliquis et in tergo foliorum expansis; conidiophoris plurimis (4-6) e stomatibus exeuntibus, 250-400 μ longis, furcis literae « sigma »

similiter curvatis, sed parte ultima rami longioris fere inflexis: conidiis late ellipsoideis 12,28, fere 18-24 µ longis, 11-26, fere 16-21 µ latis, longitudine media 20,80 µ, latitudine media 17-76 µ; oogoniis e tunica persistenti formatis, 40-53, fere 41-50 µ diam.; oosporis globosis, 27-34, fere 29-32 µ diam.

Hab. Sisymbrium Irio L., Sis. officinale (L.) Scop. et Sis. pannonicum Jacq., Europa et America bor.

62. Peronospora Sophiae pinnatae E. Gäumann, Beih. Bot. Centralbl. 3499 XXXV, Abt. 1., 1918, p. 139. - Caespitulis densissimis, in canlibus, inflorescentiis et in tergo foliorum expansis; conidiophoris plurimis (3-8) e stomatibus exeuntibus, gracilibus, 450-650 µ altis, furcis brevibus, literae « sigma » similiter curvatis; conidiis late ellipsoideis, 12-26, fere 18-22 µ longis, 11-24, fere 16-21 µ latis, longitudine media 19,95 μ, latitudine media 18-19 μ; oogoniis et oosporis ignotis.

Hab. Sisymbrium incisum Engelm. et Sophiam pinnatam Howell. - Per. parasiticae affinis.

63. Peronospora Sisymbrii Sophiae E. Gäumann, Beih. Bot. Centralbl. 3500 XXXV, Abt. 1., 1918, p. 139. — Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis vel plurimis (1-4) e stomatibus exeuntibus, 200-250 μ altis, furcis inaequalibus, fere 20 μ longis, forcipi vel literae « sigma » similiter curvatis; conidiis longe ellipsoideis, 19.34, fere 24.30 µ longis, 12.26, fere 18.22 µ latis, longitudine media 27,05 \mu, latitudine media 19,81 \mu; oogoniis e tunica persistente formatis, 43.55, fere 49.52 µ diam., oosporis globosis, 33.35 µ diam.

Hab. Sisymbrium Sophiam L. et fortasse S. canescentem Nutt. - Per. parasiticae affinis.

64. Peronospora Sisymbrii orientalis E. Gäumann, Beih. Bot. Centralbl. 3501 XXXV, Abt. 1., 1918, p. 139, fig. 35. — Caespitulis densis, in tergo foliorum expansis; conidiophoris singulis vel binis e stomatibus exeuntibus, 300-350 µ altis, furcis 20-70 µ longis, literae « sigma » similiter curvatis; conidiis ellipsoideis, 16-27, fere 22-26  $\mu$ longis, 14-26, fere 19-22 µ latis, longitudine media 23,17 µ, latitudine media 20,49 µ; oogoniis et oosporis ignotis.

Hab. Sisymbrium orientale L.—Per. parasiticae affinis. 65. Peronospora Sisymbrii Loeselii E. Gäumann, Beih. Bot. Centralbl. 3502 XXXV, Abt. 1., 1918, p. 138. -- Caespitulis rarissimis, in tergo foliorum expansis; conidiophoris singulis vel plurimis stomatibus exeuntibus, 200-250  $\mu$  altis, furcis 15-50  $\mu$  longis, literae « sigma »

similiter curvatis vel irregularibus, conidis fere globosis, 12-24, fere 16-21  $\mu$  longis, 11-21, fere 14-19  $\mu$  latis, longitudine media 18,83  $\mu$ , latitudine media 16,51  $\mu$ ; oogonis et oosporis ignotis.

Hab. Sisymbrii um Loeselii L.— Per. parasiticae affinis.

66. Perenespora Sisymbrii intermedii E. Gäumann, Beih. Bot. Centralbl. 3503

XXXV, Akt. 1., 1918, p. 138, fig. 33.— Caespitulis raris in caulibus et inflorescentiis expansis; conidiophoris plurimis (3-5) coalitis, 200-400 fere 300 μ altis, furcis parvissimis, 10-15 μ longis, fere literae « sigma » similiter curvatis, saepe una ex parte nascentibus; conidiis ellipsoideis, 16-29, fere 21-26 μ longis, 12-23, fere 16-21 μ latis, longitudine media 22,82 μ, latitudine media 18,38 μ, oogoniis et oosporis ignotis

Hab. Sophiam intermediam.—Per. parasiticae affinis.
67. Peronospora Teesdaleæ E. Gäumann, Beih. Bot. Centralbl. XXXV, 3504
Abt. 1., 1918, p. 140 — Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis e stomatibus exeuntibus, fere 300-400 μ altis, furcis literae « sigma » similiter curvatis, sed parte altima rami longioris inflexis; conidiis late ellipsoideis, 11-17, fere 12-15 μ longis, 9-14, fere 11-13 μ latis, longitudine media 21,25 μ, latitudine media 28,62 μ. Oogoniis et oosporis ignotis.

Hab. Teesdaleam nudicaulem (L.) R. Br.—Per. parasiticae affinis.

68. Peronospora Thlaspeos alpestris F. Gäumann, Beih. Bot. Centralbl. 3505 XXXV, Abt. 1., 1918, p. 140, fig. 40. — Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis e stomatibus exeuntibus, parvis, 120-250 μ altis, ramis undulatis, furcis literae « sigma » similiter curvatis, conidiis ellipsoideis, 13-27, fere 19-24 μ longis, 12-23, fere 16-19 μ latis, longitudine media 20,81 μ, latitudine media 18,13 μ; oogoniis et oosporis ignotis.

Hab. in Thlaspi alpestre L. - Per. parasiticae affinis.

69. Peronospora Thiaspeos arvensis E. Gäumann, Beih. Bot. Centralbl. 3506 XXXV, 1918, Abt. 1., p. 140. — Syn. Per. parasitica f. Thiaspeos arvensis Thüm. 1873, Fungi austr. 936, Mycoth. univers. 1874 p. 48. — Caespitulis raris, in caulibus, siliquis et in tergo foliorum expansis; conidiophoris singulis vel plurimis e stomatibus exeuntibus. 250-400, fere 300 μ altis, ramis undulatis, furcis literae « sigma » similiter curvatis vel variabilibus; conidiis late ellipsoideis, mutabilibus, 17-32, fere 24-29 μ longis, 14-26, fere 18-22 μ latis, longitudine media 25,45 μ, latitudine media 20,13 μ; oogoniis e tunica persistenti formatis, 54-59 μ diam., oosporis globosis, 35-37 μ diam.

Hab. in Thlaspi arvense L.

70. Peronospora Thiaspeos perfoliati E. Gäumann, Beih. Bot. Centralbl. 3507 XXXV, Abt. 1., 1918, p. 140. - Syn. Per. parasitica f. Thlaspeos perfoliati Thum. 1872, Fungi austr. 407. - Caespitulis densis. in caulibus et in tergo foliorum expansis; conidiophoris plurimis (6-8) e stomatibus exeuntibus, 250-300 μ altis, furcis 15-80 μ longis, literae « sigma » similiter curvatis; conidiis late ellipsoideis, 12-27, fere 16-21 µ longis 11-19, fere 16-18 µ latis, longitudine media 18,84 μ, latitudine media 16,34 μ: oogoniis e tunica persistenti formatis, frequentissimis in foliis veteribus, fere 43.48 μ diam.; oosporis globosis, 30-34 µ diam-

Hab. in Thlaspi perfoliato L.

71. Peronospora Turritidis E. Gäumann, Beih. Bot. Centralbl. XXXV, 3508 Abt. 1., 1918, p. 141, fig. 43. — Caespitulis raris, in tergo foliorum expansis; conidiophoris singulis vel plurimis e stomatibus exeuntibus, 250-300 \( \mu \) altis, furcis literae « sigma » similiter curvatis vel irregularibus; conidiis late ellipsoideis, 12-24, fere 16-21 u longis, 11-21, fere 14-18 \mu latis, longitudine media 18,94 \mu, latitudine media 16,37 µ; oogoniis et oosporis ignotis.

Hab. Turritidem glabram L. - Per. parasiticae affinis. 72. Peronospora Cephalariae F. Vincens, Bull. Soc. Mycol. Fr. 1913, 3509 p. 174, t. VI. - Plagulis densis pallide griseo-violaceis; conidiophoris 3-5 gregariis, 250-300 × 7-8, basi subinflatis, supra 4-6 ramosis; ramulis inferioribus et mediis plus v. minus flexuosis. suberectis, extimis inaequalibus, patentibus, rectis v. curvatis; conidiis ovoideis 25-30 > 15-20, infra leniter apiculatis, sordide violaceis; oosporis 30-35 µ diam. episporio obscuro verrucoso praeditis.

Hab. in foliis Cephalariae leucanthae, raro C. alpinae et C. transylvanicae, in Horto botanico Toulouse. Gallia .- Per. Dipsaci affinis.

73. Peronespera Chamaesycis Wilson, Mycologia 1914, p. 204, t. 135 3510 f. 11-13. - Maculis epiphyllis decoloratis, griseo-v. dilute-aureis; conidiophoris hypophyllis dense caespitosis 1-3 e stomatibus erumpentibus, 200-450 × 6-10, 6-9-ies ramosis, ramis elongatis, gracilibus, flaccidis, incurvatis, flexuosis, ultimis subaequalibus, axialibus longioribus parum subulatis, angustis, rectis, 5-8 > 2-4: conidis globosis v. ovoideis, 20-28 \* 12-20, violaceis; oogoniis tenuiter tunicatis, flavidis; oosporis 30-40 µ cr.. flavo-brunneis, episporio leviusculo v. plus minus ruguloso.

Hab. in foliis Euphorbiae (e Sect. Anisophylli) serpen-

tis, maculatae, stictosporae, humistratae, glyptosporae, in America boreali. — Cnfr. n. 76.

74. Peronospora Esulae E. Gäumann, Ann. Cons. et Jard. Bot. Genève, 351 v. XXI, 1919, p. 11, fig. 2. — Caespitulis mollibus, griseo-brunneis, tergum foliorum nonnulla parte subtegentibus; conidiophoris singulis vel plurimis e stomatibus exeuntibus, 300-550 μ altis, trunco ½-3/4 totius altitudinis efficienti, 8-11 μ crasso, ramis 3-7 ies dichotome ramosis, leviter curvatis; furcis terminalibus brevibus, rectangulis, paene rectis; conidiis leviter flavis, 12-31, fere 19-24 μ longis, 8-23, fere 12-18 μ latis. Longitudine media 22-21 μ, latitudine media 15,62 μ. Oosporis ignotis.

Hab. in foliis vivis E u p h o r b i a e E s u l a e L., Europa media. 3512
75. Peronospora valesiaca E. Gäumann, Ann. Cons. et Jard. Bot. Genève, v. XXI, 1919, p. 9; Mitt. Naturf. Ges. Bern, 1919 [1920], p. 178, fig. 2. — Caespitulis mollibus, griseo-brunneis, totum tergum foliorum subtegentibus; conidiophoris singulis vel plurimis (1-4) e stomatibus exeuntibus, 300-400 μ altis, trunco ½ ³/4 totius altitudinis efficienti, 5-9 μ crasso; ramis 5-8 ies dichotome ramosis, leviter flexuosis, furcis terminalibus rectangulis, ramis utribus vel longitudine aequali vel uno paullo longiore, fere litterae sigma simili ter curvatis. Conidiis leniter brunneis 14-32, fere 21-24 μ longis, 12-28, fere 18-21 μ latis; longitudine media 22,30 μ, latitudine media 19,68 μ. Oosporis ignotis.

Hab. in foliis vivis Euphorbiae Gerardianae, Wallis Helvetia.

76. Peronospora Euphorbiae glyptospermae E. Gäumann, Ann. Cons. et 3513 Jard. bot. Genève, v. XXI, 1919, p. 10, fig. 1. — Syn. Per. Chamaesycis Wils., Mycologia VI, 1914, p. 204 p. p. — Caespitulis mollissimis, griseo-brunneis, difficile visibilibus, totum tergum foliorum subtegentibus; conidiophoris fere singulis (1-3) e stomatibus exeuntibus, 150-300 μ altis, trunco ½-¾ totius altitudinis efficienti, gracili, 4-7 μ crasso; ramis 3-5 ies dichotome ramosis, leviter curvatis; furcis terminalibus brevissimis, 4-20 μ longis, rectangulis, rectis vel leniter curvatis; conidiis leviter flavo-brunneis, ellipsoideis, 17-34, fere 24-29 μ longis, 8-23, fere 14-19 μ latis. Longitādine media 26,27 μ, latitudine media 16,74 μ. Oosporis ignotis.

Hab. in foliis vivis Euphorbiae glyptospermae L.-gelm., Nebraska, Amer. bor.—Vide supra n. 73

77. Peronospora stigmaticola Raunkiær, Botanisk Tidsskrift, XVIII 3514 .
p. 108 (1892-93), Lind-Rost., Fungi Dan. p. 69. — Hyphis conidio-

phoris erectis, sparsis vel fasciculatis sordide et dilute violascentibus, usque ad 0,5 mm, altis, c. 8-15 µ crassis, apice inaequaliter 4.7 ies dichotomis; ramis sensim attenuatis, patentibus vel divaricatis, ultimis conoideo-subulatis, rectis vel leviter curvatis, 6-12 u longis; conidiis ellipsoideis, 30-50 µ longis, 10-15 µ latis, obtusinsculis, sordide et dilute violascentibus; oogoniis sphaeroideo-ovoideis. 35-55 u diam.; oosporis sphaeroideis 25-35 u diam., episporio laete flavido-fusco praeditis. Canalis stigmaticus praesertim plantae nutricis oosporis repletus.

Hab. in floribus, praecipue stigmatibus et filamentis Menthae arvensis et aquaticae, in Dania (Iylland) et Scania.

78. Perenespora Senneniana Fragoso et Sacc. in Sacc., Notae mycol. 3515 XXII, 1917 (Acc. Pad.) p. 158. - Media inter Peron. Trifoliorum et Peron. Viciae; hyphis, ramis ramulisque Peron. Viciae; conidiis vero oblongo-ellipsoideis, utrinque leviter obtuseque acutatis, multo amplioribus, nempe 35-38 \* 16-19, sordide diluteque olivaceis, intus nubilosis; caespitulis effusis, hypophyllis, dilute olivaceo-griseis.

Hab. in foliis languidis Lathyri (Orobi) nigri, Planes in Pyrenaeis, alt. 1450 m., ubi legit egr. SENNEN., Martio 1916 et communicavit cl. G. FRAGOSO. - Forma, magnitudine coloreque conidiorum distincta species videtur.

79. Peronospora Phacae E. Gäumann, Mitt. Naturf. Ges. Bern, 1919 3516 [1920], p. 178.

Hab. in Phaca frigida, in Alpibus Helvetiae.

80. Peronospora Oxytropidis E. Gäumann, 1. c. Hab. in Oxytropide campestri, Albula Helvetia.

81. Peronospora Trifolii alpestris E. Gäumann, l. c. p. 182.

Hab. in Trifolio alpestre, Helvetia, Germania bor. Dania.

82. Peronospora Trifoliorum De By. - var. manshurica Naoumoff, Bull. 3519 Soc. Mycol. Fr. 1914 p. 73, t. I f. 2. - Conidiophoris altioribus  $240.900 \times 7.9$ , conidiis fere globosis vel late ellipsoideis,  $21.27 \times 18.24$ , oosporis maioribus 36.48 µ diam.

Hab. in foliis vivis Glycines hispidae, prov. Austro-Ussuriensi (Rossiae Orient.).

83. Peronospora narbonensis E. Gäumann, Mitt. Naturf. Ges. Bern. 3520 1919 [1920], p. 179.

Hab. in Vicia narbonensi, Emilia, Italia bor.

4. Peronospora Viciae sativae E. Gäumann, Mitt. Naturf. Ges. Bern, 3521 1919 [1920], p. 184.

3517

3518

Hab. in Vicia sativa, Europa, America bor., Asia.

85. Peronospora Harioti E. Gäumann, Bull. Soc. neuchâtel. Sc. Nat. 3522 t. XLIII, 1919, Extr. p. 4, fig. 1-2. — Caespitulis densis, brunneoviolaceis, tergum foliorum nonnulla parte subtegentibus; conidiophoris singulis vel plurimis (1-14) e stomatibus exeuntibus, 180-350 μ altis, gracilibus, trunco 0,5·²/2 totius altitudinis efficienti, 6-10 μ crasso, basi saepe leviter tumida; ramis 3-6 ies dichotome ramosis, leviter curvatis; furcis terminalibus rectangulis, 10-25 μ longis, fere leviter curvatis; conidiis late ellipsoideis vel paene globosis, leniter flavis, 16-31, fere 21-26 μ longis, 14-27, fere 18-23 μ latis. Longitudine media 23,14 μ, latitudine media 20,74 μ. Oosporis ignotis.

Hab. in foliis vivis Buddleiae globosae Hope, in Gallia centrali. — Per. sordidae proxima sed caracteribus conidiorum diversa.

86. Peronospora americana E. Gäumann, Ann. Cons. et Jard. Bot. 3523 Genève, v. XXI, 1919, p. 21, fig. 5. — Caespitulis mollibus, brunneo-violaceis, tergum foliorum nonnulla parte subtegentibus; conidiophoris singulis vel plurimis (1-9) e stomatibus exeuntibus, 250-600 μ altis, trunco 0,5-²/s totius altitudinis efficienti, 8-13 μ crasso; 4-8 ies dichotome ramosis, furcis terminalibus 10-25 μ longis, rectangulis, leviter curvatis; conidiis leviter brunneis, longe ellipsoideis, 24-43, fere 33-38 μ longis, 12-28, fere 16-22 μ latis. Longitudine media 34,43 μ, latitudine media 19,14 μ. Oosporis singulis in foliis marcidis, 19-43 μ diam., episporio flavo, crasso, valde sed irregulariter rugoso Nebraska, Amer. bor.

Hab. in foliis vivis Polygoni ramosissimi Michx., Nebraska, Amer. bor.

87. Peronospora Jaapiana P. Magn., Ber deutsch. bot. Ges. XXVIII 3524 Bd., 1910, p. 250, tab. VII. — Hyphis 225,55-329,93 μ long., ramulis supra medio pluries dichotomice divisis, apice angustatis superioribus brevibus acutis, patentibus; conidiis ovoideis utrinque rotundatis epapillatis e violaceo flavidis, 25-34 \* 16,5-18.

Hab. in foliis Rheirhapontici, Trignitz (Priegnitz), Germania (O. JAAP). — Per. Rumicis affinis.

88. Peronospora Agrorum E. Gäumann, Mitt. Naturf. Ges. Bern. 1919 8525 [1920], p. 179.

Hab. in Androsace septentrionali, Suecia.

89. Peronespora alpicola E. Gäumann, Mitt. Naturf. Ges. Bern, 1919 3526 [1920], p. 182.

Hab. in Ranunculo aconitifolio, pyrenaeo, Seguieri, in Alpibus Helvetiae, Vogesen, Schwarzwald, Tirolia.

90. Peronospora hiemalis E. Gäumann, l. c. p. 183.

3527

Hab. in Ranunculo acri, Europa, America bor., Asia occ.

91. Peronospora Ranunculi E. Gäumann, l. c. p. 183.

3528

Hab. in Ranunculo repenti, Europa, America bor.

92. Peronospora apiospora Poirault, Bull. Assoc. Nat. de Nice, 1915 3529 p. 8 (extr.). — Maculis amplis griseo-violaceis; conidiophoris sparsis, albis, elatis, hypha primaria e basi leviter dilatata cylindrica, 7 μ cr., parce ramosa; ramis elongatis, leviter curvulis, apice conidigeris; conidiis longe piriformibus 46-48 × 26; oosporis ignotis.

Hab. in foliis Ranunculi graminei, Caussols, Alp. Marit. — Diversa a Per. Ficariae et Per. pygmaea, Ranunculacearum incolis.

93. Peronospora Aparines (De Bary) E. Gäumann, Svensk Bot. Tidskr., 3530 Bd. 12., 1918, p. 444, Peronospora calotheca De B. γ Aparines De By., Ann. Sc. Nat. Bot. (1863) p. 112.— Caespitulis densis, griseis, totum tergum foliorum tegentibus; conidiophoris singulis vel binis e stomatibus exeuntibus, 250-750 μ altis; trunco ½-½-½ totius altitudinis efficienti, 9-14 μ crasso, basi leniter tumida; parte summa arboris 4-7 ies dichotome ramosa, ramis plus minus rectis; furcis terminalibus rectangulis, leviter curvatis, ramulis utrisque fere aequilongis (6-21 μ); conidiis late ellipsoideis, fulvo-violaceis, 22-38, fere 29-34 μ longis, 17-29, fere 21-25 μ latis; longitudine media 31,18 μ latitudine media 22,66 μ. Oosporis globosis, flavis, 27-43 μ diam., episporio dense reticulato.

Hab. in foliis Galii Aparines L., Europa media et bor.

94. Peronospora borealis E. Gäumann, Svensk Bot. Tidskr. Bd. 12., 3531

1918, p. 444; Mitt. Naturf. Ges. Bern, 1919 [1920], p. 178.—Syn.

Per. calotheca Auct.— Caespitulis mollibus, griseis, tergum foliorum nonnulla parte tegentibus; conidiophoris singulis vel binis e stomatibus exeuntibus, 250-450 μ altis, trunco ½-2/2 totius altitudinis efficienti, 6-9 μ crasso, basi leviter tumida; parte summa arboris 4-6 ies dichotome ramosa, ramis plus minus rectis; furcis terminalibus rectangulis, leviter curvatis, ramulis utrisque longitudine fere aequali (7-14 μ); conidiis ellipsoideis, fulvo-violaceis, 21-34, fere 25-29 μ longis, 11-23, fere 15-20 μ làtis; longitudine media 27,33 μ latitudine media 17,31 μ. Oosporis ignotis.

Hab. in foliis Galii borealis L., Europa bor., America bor. 95. Peronospora insubrica E. Gäumann, Mitt. Naturf. Ges. Bern, 1919 3532

[1920], p. 178.

Hab. in Galio purpureo, in Cant. Ticino, Helvetiæ.

96. Peronospora silvatica E. Gäumann, Svensk Bot. Tidskr. Bd. 12., 3533 1918, p. 445. — Syn. Per. calotheca Auct. — Caespitulis mollibus, griseis, tergum foliorum nonnulla parte tegentibus; conidiophoris vel singulis vel trinis e stomatibus exeuntibus, 200-350 μ altis; trunco ²/₃ totius altitudinis efficienti, 8-14 μ crasso, basi leviter tumida, parte summa arboris 4-8 ies dichotome ramosa, ramis plus minus rectis; furcis terminalibus rectangulis, leviter curvatis, ramulis utrisque fere aequilongis (5-12 μ); conidiis paullum violaceis, saepe minutissime papillatis, late ellipsoideis, 14-31, fere 20-25 μ longis, 9-24, fere 15-19 μ latis; longitudine media 22,72 μ, latitudine media 17,26 μ. Oosporis ignotis.

Hab. folia Galii silvatici L., Europa media et bor.

97. Peronospora Galii veri E. Gäumann, Svensk Bot. Tidsks., Bd. 12., 3534 1918, p. 144. — Syn. Per. calotheca Auct. — Caespitulis griseis, densis, totum tergum foliorum tegentibus; conidiophoris singulis vel plurimis (1-14), e stomatibus exeuntibus, fere 400-550 μ altis, trunco <sup>3</sup>/<sub>4</sub> totius altitudinis efficienti, 7-9 μ crasso, basi leviter tumida; parte summa arboris 6-8 ies dichotome ramosa, ramis plus minus rectis; furcis terminalibus rectangulis, rectis vel leviter curvatis, ramulis utrisque fere aequilongis (6-12 μ); conidiis ellipsoideis, fulvis, 19-34, fere 27-31 μ longis, 11-23, fere 16-19 μ latis; longitudine media 27,12 μ, latitudine media 17,75 μ. Oosporis ignotis.

Hab. folia caulesque Galii veri L., Europa media et bor.
98. Peronospora minima Wilson, Mycologia 1914, p. 209, t. 136, f. 3535
18-22. — Hypophylla; conidiophoris late effusis, caespitosis, griseis, maculis epiphyllis decoloratis; conidiophoris rectis v. flexuosis, 2-10 fasciculatis, brevibus, pauci ramosis, 150-300 × 8-10, 1-3 v. 4 ies ramosis, ramis rectis, ultimis conoideis, 15-20 × 4-6, v. conidiophoris minimis cum 3-4 conidiis; conidiis globosis, dilute aureo-brunneis, 28-32 μ; oosporis aureis subglobosis, 65-80 μ diam., episporio ruguloso.

Hab. in foliis Saxifragae cernuae, Tromsö Norvegia (G. LAGERHEIM).

99. Peronospora indica Sydow, Ann. Mycol. 18., 1920, p. 157, cum 3536 icone. — Caespitibus laxis, albidis; conidiophoris singulis vel paucis erumpentibus, 359-500 μ altis, basi 5 ½-7 μ latis, pluries dichotome ramosis; ramis primariis oblique erectis, paenultimis plerumque

valde undulato-curvatis, ultimis saepius inaequalibus rectis vel parum curvatis; conidiis subglobosis vel obovatis,  $23-30 \approx 16-24$ ; oosporis immaturis tantum visis, brunneolis,  $30-34 \mu$  diam.

Hab. in foliis Calceolariae scabiosifoliae, Dehra Dun, Indiae or. (E. J. BUTLER).

100. Peronospora Celsiae H. et P. Syd. in Syd. et Butl., Ann. Mycol. 3537 X, 1912, p. 245. — Caespitulis densiusculis, primitus albidis, dein pallide griseis v. griseo-violaceis; hyphis conidiophoris plerumque pluribus erumpentibus, 300-600 μ alt. basi μ 7-10 μ cr.; ramis 4-7 ies dichotome partitis, ascendentibus, penultimis valde curvatis; ramulis ultimis plerumque leviter curvatis aut omnibus aequilongia aut uno plus minusve breviore; conidiis late ellipsoideis, obtusis quoad formam et magnitudinem vix variabilibus, 17-21 × 15-17, pallidissime violaceis; oosporis nondum visis.

Hab. in foliis Celsiae coromandelianae, Pusa Indiae or. (E. J. Butler). — P. Linariae videtur proxima.

101. Peronospora Pedicularis Björn Palm, in Svensk Bot. Tidskr., Bd. 3588 5., 1911, p. 356. — Conidiophoris 270-325 μ alt. ad 10,5 μ crass. basi tumido-inflatis, saepe 14-16 μ; ramis 4 6 ies dichotome partitis, angulatim divergentibus, ramulis ultimis leviter recurvatis; conidiis maximis, latis, obtuse ovatis 26,5-34 μ long. 18,5-22,5 crass., membrana pallide violacea, contentu flavidulo. Oosporis maturis non visis, junioribus autem in parenchymate folii copiosissime observatis.

Hab. in Pediculari lapponica, Lapponiae Tornensis in locis Albisko Björkliden, Vaggejokk, Scandinavia.

102. Peronespora verna E. Gäumann, Ann. Mycol. 16., 1918, p. 198, 3539 fig. 1 c. — Differt a Peronespora agresti conidiis maioribus, 10-27, fere 19-22 μ longis, 8-23, fere 16-20 μ latis. Longitudine media 20,90 μ latitudine media 17,76 μ.

Hab. in foliis vivis Veronicae serpyllifoliae L., Stockholm Suecia. — Peronosporae formae in foliis vivis Veronicae arvensis L., V. Chamaedrys L., V. praecocis All., V. prostratae L., V. teucrii L., V. Tournefortii Gmel. nec non V. vernae L., huc pertinere videntur.

103. Peronospora saxatilis E. Gäumann, Ann. Mycol. 16., 1918, p. 198, 3540 fig. 1 b. — Differt a Peronospora agresti conidiis maioribus, 19-40, fere 28-32 μ longis, 12-29, fere 19-23 μ latis; longitudine media 30,75 μ, latitudine media 21,63 μ.

Hab. in foliis vivis Veronicae fruticantis, Waadt-

länderalpen Helvetia.

- 104. Peronospora aquatica E. Gäumann, Ann. Mycol. 16., 1918, p. 149.— 3541 Differt a Peronospora agresti conidiis maioribus 24-43, fere 33-38 μ longis, 9-27, fere 20 23 μ latis. Longitudine media 35-26 μ, latitudine media 21,02 μ.
- Hab. in Veronica Anagallide, Europa, America bor.

  105. Peronospora grisea (Unger 1847) De B.—Syll. VII, P. I p. 255— 3542

  Secundum E. Gäumann (Ann. Mycol. 16., 1918, p. 189) species Ungeriana in Veronica Beccabunga tantum viget, cum conidis, 23,65 × 16,10, in aliis gen. Veronicae speciebus novam speciem Per. agrestis cum subspeciebus pluribus extat.
- 106. Peronospora arvensis E. Gäumann, Ann. Mycol. 16., 1918, p. 198. 3543 Differt a Peronospora agresti conidiis maioribus, 14-34, fere 22-26 μ longis, 11-31, fere 19-23 μ latis, longitudine media 24,67 μ, latitudine media 21,28 μ.

Hab. in foliis vivis Veronicae hederifoliae L.— Peronosporae forma in foliis vivis V. triphyllae huc pertinere videtur, Altenburg Hungaria (LINHART, Fungi hung. 488).

107. Peronospora silvestris E. Gäumann, Ann. Mycol. 16., 1918, 3544
p. 199.— Differt a Peronospora agresti conidiis maioribus, 22-39, fere
28-34 μ longis, 10-26, fere 18-22 μ latis. Longitudine media 31,74 μ,
latitudine media 49,94 μ.

Hab. in foliis vivis Veronicae officinalis L., Marienspring prope Cladow Germania (P. Sydow, Myc. March. 2969).—
Peronosporae forma in foliis vivis V. urticifoliae Jacq. forsan huc pertinet.

108. Peronospora agrestis E. Gäumann, Ann. Mycol. 16., 1918, p. 198. — 3545 Caespitulis mollibus, griseo-violaceis, totum tergum foliorum tegentibus; conidiophoris singulis vel plurimis e stomatibus emergentibus, 200-600 μ altis, 4-8-ies dichotome ramosis; trunco ½-½, totius altitudinis efficienti, 5-9 μ crasso, basi leviter tumida; ramis leviter curvatis vel undulatis; furcis terminalibus rectangulis, fere literae graecae sigma similiter curvatis vel ramis utribus paene rectis, 8-20 μ longis; conidiis ellipsoideis, leviter griseo-violaceis, 9-26, fere 17-20 μ longis, 8-23, fere 15-18 μ latis. Longitudine media 19,07 μ, latitudine media 15,24 μ. Oosporis 36-57 μ diam., episporio crasso, flavo, levi vel paullo reticulato.

Hab. in foliis vivis Veronicae politae Fries, Helvetia. Fungus in foliis vivis Veronicae agrestis L. huc pertinere videtur.

109. Peronospora palustris E. Gäumann, Ann. Mycol. 16., 1918, p. 198. 3546 fig. 1 a. - Differt a Peronospora agresti conidiis maioribus, 20-36. fere 26-39 µ longis, 10-27, fere 17-20 µ latis. Longitudine media 27,46 µ latitudine media 18,66 µ.

Hab. in foliis vivis Veronicae scutellatae L., Svendberg Suecia.

Species gen. Peronosporae secundum ordinem alphabeticum Familiarum et matricarum dispositae:

Berraginaceae 1. Campanulaceae 2. Caryophyllaceae 3-6, Chenopodiaceae 7-17. Compositae 18-19. Cruciferae 20-71. Dipsacacese 72. Euphorbiaceae 73-76. La. biatae 77. Leguminosae 78-84, Loganiaceae 85, Polygonaceae 86-87, Primulaceae 88, Ranunculaceae 89-92, Rubiaceae 93-97, Saxifragaceae 98, Scrophulariaceae 99-109.

## BREMIA Regel. - Syll. VII p. 243.

- 1. Bremia ovata K. Sawada, Botan. Magazin Tokyo, 1914, p. 83, 3547 cum icon.; Mycologia 1919, p. 85. - Hyphis 7 μ cr.; conidiophoris caespitosis, usque 1 mm. long. 3-8-ies ramosis, plerumque 7-8 septatis, ramulis brevibus, terminalibus sphaeroideo-v. capitato-incrassatis, 3-7 sterigmatibus praeditis; sterigmis 6-8 µ long.; conidiis ovoideis v. oblongo-ovoideis, infra minute pedicellatis, papilla apicali obsoleta, 14-18 \* 10-13, hyalinis, granulatis.
- Hab. in Crepide japonica, Taiwan, Formosa, Japonica, 2. Bremia Saussureae K. Sawada, Botan. Mag. Tokyo, 1914. p. 80, 3548 cum icon.; Mycologia 1919, p. 85. - Maculis foliicolis pallide flavidis. polygoniis. 15 mm. circa latis, caespitulis hypophyllis densis albidis insidentibus; hyphis intercellularibus granulatis in mesophyllo diffusis 8-17 μ cr.; haustoriis ovoideis, obovoideis v. irregularibus 14-27 \* 5-14; conidiophoris singulis v. caespitosis, elongatis usque mm. 1,021, 3-6-ies ramosis, ramulis omnibus brevibus obtusis. plerumque 5-6 septatis, terminalibus incrassatis, sterigmatibus 4-6 praeditis, 6-10 > 3; conidiis e late ellipsoideis elongato-oblongis, supra depresse papillatis, infra pedicellatis, granulatis, 24-57 \* 18-28. hyalinis.

Hab. in folis Hemisteptae carthamoidis (= Saussureae affinis), Taiwan, Formosa, Japonia.

3. Bremia Sonchi K. Sawada, Botan. Magazin Tokyo, 1914, p. 80, 3549 cum icon.; Mycologia 1919, p. 84. - Maculis foliicolis v. caulicolis. parvis, polygoniis, raro totum folium tegentibus; hyphis super-

ficialibus, sparsis arachnoideis, intercellularibus hyalinis, minute granulatis 8-17  $\mu$  cr., haustoriis sphaeroideis, quandoque obovoideis v. subclavatis, 11-24  $\times$  7-13, conidiophoris caespitosis 230-560  $\mu$  long. supra medium 3-6-ies ramosis, infra parum inflatis, ramis angustis curvis, ramulis terminalibus apice sphaeroideis, 2-6 sterigmatibus praeditis, sterigmatibus 4-7  $\times$  2,5-3; conidiis plerumque globosis raro ovoideis, supra depresse papillatis, infra anguste pedicellatis, contentu protoplasmico lucem refrangenti, 17-24  $\times$  13-21.

Hab. in foliis caulibusque Sonchi oleracei, Formosa Japonia. — Br. Lactucae proxima \*) sed ramulorum situ et magnitudine, apicis ramulorum forma satis diversa.

4. Bremia graminicola Naoumoff, Bull. Soc. Mycol. Fr. 1913, p. 274, 3556 t. XIII f. 1-3. — Maculis primo lutescentibus dein fuscis, subinde etiam totum folium occupantibus; caespitulis floccosis, albidis, dein griseis, conidiophoris hypophyllis, rarius epiphyllis, usque ad 600 μ alt. 9-10 μ diam., inferne in bulbo globoso inflatis, superne 5-6-ies dichotomis, ramis rigidis alterne ultro citroque curvatis, ramulis ultimis in vesiculam inflatis, papillas 4 insidentibus. Conidiis fere globosis, uno apice quandoque leniter acuminatis, hyalinis, 12 μ diam. — Oosporis nondum cognitis.

Hab. in foliis vivis Arthraxonis ciliaris in prov. Austro-Ussuriensi Rossiae orient. (NAOUMOFF) et in China (MIYAKE, in Bot. Mag. Tokyo, 1914).

BREMIELLA G. W. Wilson. Mycologia 1914, p. 195.— Hyphae fertiles solitariae v. fasciculatae e stomatibus erumpentibus, dichotome-v. pseudomonopodio-ramosae; ramuli terminales longi, apice in vesiculam apophysatam abientes; conidia hyalina, pyriformia, apice papillata, per zoosporas evacuantia; oosporae subrugosae.

1. Huc pertinet Peronospora megasperma Berlese et tunc Bremiella 3551 megasperma (A. Berl.) G. W. Wilson vocanda.

PERONOPLASMOPARA Clint. —? Syn. Pseudoperonospora Rostow., Syll. XVII p. 520.

1. Perenoplasmopara pertericensis Lamkey in F. L. Stevens, Mycologia 3552

<sup>\*)</sup> De qua enfr. doct. monogr. Cl. J. Schweizer, Die kleinen Arten bei Bremia Lactucae Reg. und ihre Abhängigkeit von Milieu-Einflüssen – Inaug. Diss. Univ. Bern 1919 (Verh. thurgau. naturf. Ges., Heft. 23., 1919. 61 pag. cum icon.).

12., 1920, p. 52.— Maculis hypophyllis irregularibus; conidiophoris e stomatibus singulis v. 2-3 emergentibus, 80-300  $\approx$  5,5-11, pseudomonopodialiter 3-5 ramosis, ramulis ultimis acutatis 9-18  $\mu$  long.; conidiis ellipsoideis, hyalinis, 14-24  $\approx$  16,5-28; oosporis non praesentibus.

Hab. in foliis Meliae Azedarach [Meliaceae], Guanica Florida, America trop.

- Peronoplasmopara Humuli Miyabe et Takahashi (descriptio nulla, 3553 enfr. Syll. XXI, p. 861).
- \*) PLASMOPARA Schröter Syll. VII p. 239, IX p. 342, XI p. 243, XIV p. 460, XVII p. 520, XXI p. 861.
- Plasmopara Wildemaniana P. Henn. Syll. XXI p. 861. -- var. ma- 3554
   crospora K. Sawada, Journ. Formosan Nat. Hist. Soc., 1914, pp. 2-4. Tanaka, Mycologia 1922, p. 87. A typo praecipue recedit conidiis majoribus, 14-18 \* 11-13.

Hab. in foliis Justiciae procumbentis [Acanthaceae], in Insula Formosa Japoniae.

2. Plasmopara Acalyphae (Wilson) G. W. Wilson, Mycologia 10., 1918, 3555 p. 169, Physotheca A. Wilson, l. c. — Caespitulis hypophyllis sparsis densis albicantibus, maculis epiphyllis subbullatis e decoloratis flavescentibus v. obscure brunneis demum arescentibus quandoque infra rubescentibus; conidiophoris solitariis v. 2-3 e stomatibus exeuntibus,  $300\text{-}500 \times 5\text{-}7$ , supra 4-5-ramosis; ramis elongatis rectiusculis, ramulis saepe adpressis, ramulis ultimis rectis, leniter inflexis, brevibus, 4-10  $\mu$  long., plus minus conoideis et late truncatis; conidiis brunnescentibus, e ovoideis globosis,  $12\text{-}22 \times 10\text{-}16$ ; oogoniis non visis.

Hab. in Acalypha virginica [Euphorbiaceae], Madison Wisc., Amer. bor. (T. T. DAVIS).—Per. illinoisensi Farlw. et australi Speg. proxima.

3. Plasmopara cephalophora Davis, Parasit. Fungi Wisconsin VI; 3556 Trans. Wisc. Ac. of Sc. etc. XIX, 1919, II, p. 709, cum icon. — Conidiophoris hypophyllis, effusis, crassis, rectis quandoque subclavatis, 150-270 × 6-14, simplicibus v. apice in ramulos parvos, breves (6-15 μ) sterigmata cylindracea, recta, truncata, quandoque

<sup>\*)</sup> Cnfr. Wartenweiler A., Beiträge zur Systematik und Biologie einiger Plaemopara-Arten, Ann. Mycolog. 16., 1918, pp. 249-299, cum icon. et 3 tab.

subinflata gerentes divisis; conidiis hyalinis, e ellipsoideis fusoideo-oblongis, utrinque plus v. minus acutis, uno latere depressis, stipitatis, apice papillatis, 45-70 × 20-33.

Hab. in foliis Physostegiae parviflorae [Labiatae], Shiocton, Plover, Dexterville, Wisc., Amer. bor. — Oosporis immaturis raro inventis.

4. Plasmopara nivea (Ung.) Schr. — Syll. VII p. 240. — A Cl. Ca- 3557 spary anno 1855 in *Peronosp. Umbelliferarum* (quae prioritatis causa ut synon. habenda est) distinctae sunt varietates (potius formae specificae), sequentes:

Plasmopara Conii (Casp.) Trotter, forma minor, stipitibus 1/tr-1/tt" altis, or- 3558 dinibus ramorum 1-2 ramellis ultimi ordinis brevissimis, subulatis, rectis, acrosporis majoribus.

Hab. in Conio maculato, Europa media.

Plasmopara Angelicae (Casp.) Trott., forma major stipitibus 1/18·1/17''' altis, or- 3559 dinibus ramorum 2-4, ramellis ultimi ordinis longioribus, paululum curvatis; acrosporis majoribus.

Hab. in Angelica silvestre, Europa media.

Plasmopara Chaerophylli (Casp.) Trott., ut antecedens, ramellis ordinis ultimi 3560 rectis.

Hab. in Chaerophyllo silvestre, Europa media.

Plasmopara Aegopodii (Casp.) Trott., forms major, stipitibus  $\frac{1}{6}$ .  $\frac{1}{6}$ .  $\frac{1}{6}$  is a 3561 ordinibus ramorum 2-3, ramellis ultimi ordinis rectis, brevissimis, acrosporis majoribus  $\frac{1}{153}$ .  $\frac{1}{142}$  in latis  $\frac{1}{146}$ .  $\frac{1}{148}$  in long.

Hab. in Aegopodio Podagraria, Europa media.

**SCLEROSPORA** Schroeter. — Syll. VII p. 238, IX p. 341, XIV p. 461, XVII p. 520, XXI p. 861.

Scierospora Mischanthi T. Miyake, Rep. of work of Sugar exp. St. 3562
 Gov. Formosa, Pathol. Bull. I (1911), 61 pag. 9 tav.

Nomine nobis tantum nota.

Hab. in Mischantho (Graminaceae), in Japonia.

Sclerospora Oryzae Brizi, La peronospora del riso, « Natura » Mi- 3563 lano 1919 v. 10., pp. 168-180, cum tab. col. — Scl. macrospora Sacc., Gabotto, Giornale di risicoltura, Vercelli 1915, n. 18., pp. 292-294, cum icon.

Hab. in foliis, culmis et inflorescentiis Oryzae sativae, Italia bor. et Japonia.

3. Scierospora Sacchari Miyake, Rep. of work of Sugar experiment 3564 Stat. Gov. Formosa, Path. Bull. I (1911), 61 pag. 9 tav.

Hab. in plantis Sacchari officinarum, Zeae Maydis et Euchlaenae luxuriantis cultis in ins. Formosa, nec non in plantis Sacch. off. in Quensland et Ins. Fiji. -Conidiophora 170 µ longa.

4. Sclerospora javanica Bj. Palm, Medeeling. van het Laborator. voor 3565 Plantenziekten nº 32 p. 18 cum icon., Batavia 1918, Peronospora Maydis Rac. 1897, Syll. XIV p. 460, non Butler. - Maculis striatis albo-flavis, saepe totum folium occupantibus; mycelio intercellulari; haustoriis filiformibus dichotome ramosis; conidiophoris 1300 ≠ 20-25, basim versus septatis; sterigmatibus 6.9 µ long., rectis: conidiis plerumque oblongo-rotundatis, 19-26 \* 15-20, tubo germinantibus; oosporis non visis.

Hab, in foliis culmisque Zeae Maydis et Z. Maydis x Euchlaenae luxur. in Java, Madoerah et Sumatra.

5. Scierospora Maydis (Raciborski) Butler, The dowrus mildew of Maize, 3566 Mem. of Depart. of Agricult. in India, Bot. Ser. vol. V n. 5 (1913) (Per Maydie Racib.) Palm, l. c. p. 18. Syll. XIV p. 460. - Maculis albo-flavis, matricem leviter deformantibus; mycelio intercellulari. conidiophoris plus minusve 150 µ long.; sterigmatibus 15-20 µ long. rectis; conidiis oblongis, apice obtuse rotundatis 28-45 \* 16-23, tubo germinantibus; oosporis non visis.

Hab. in foliis culmisque Zeae Maydis et Euchlaenae luxuriantis in India oriental. (BUTLER) et in ins. Philippinis (BAKER), nec non in Bengala.

6. Sclerospora philippinensis W. H. Weston, Journ. Agric. Research 3567 19., 1920, p. 118, cum tabulis. - Syn. Scl. Maydis Reinking 1918, Philipp. Journ. of Sc S. A., 13., n. 5, cum icon et tab., non Butler — Maculas lineares v. irregulares, albido-flavas v. pallidas efficiens saepe totum folium discolorans et matricem plus minusve deformans; hyphis mycelicis inter cellulas in totas partes praeter radicem crescentibus, ramosis, tenuibus, plerumque 8 µ diam., sed irregulariter constrictis inflatisque; haustoriis simplicibus, vesiculiformibus subdigitatisve, minutis, 8 > 2; conidiophoris e stomatibus exeuntibus, erectis 150-400 × 15-26, in parte inferiore cellulas basilares gerentibus, superne 2-4-dichotome-ramosis, ramis robustis cum sterigmatibus conoideo-subulatis 10 µ long. leviter curvatis; conidiis elongato-ellipsoideis, elongato-ovoideis v. rotundato-cylindraceis variae dimensionis, plerumque 27-39 v 17-21, hyalinis, episporio tenue, intus minute granulosis, apice leviter rotundatis; basi apiculo minuto praeditis semper per tubum germinantibus; oosporis nondum visis.

Hab. in foliis, vaginis, glumis, culmis et inflorescentiis praecipue

Zeae Maydis, rarius Euchlaenae luxuriantis et Andropogonis Sorghi, per omnes partes in Ins. Philipp.

7. Sclerospora spontanea W. H. Weston, Journ. Agric. Research, 20., 3568 1920, p. 678, tab. 76-79. — Conidiophoris 350-550  $\mu$  long. apice expansis, cellula basali 5-8  $\mu$  cr. 140-260  $\mu$  longa; supra 22-32  $\mu$  ad septum constrictis et tunc 20  $\mu$  cr., infra ramos constrictulis; ramis elongatis angustis parum recurvato-adscendentibus; sterigmatibus 13  $\mu$  long.; conidiis cylindraceis v. cylindraceo-ellipsoideis, 39-45  $\times$  15-17; oosporis hucusque ignotis.

Hab. in Zea Mays, Saccharo spontaneo et officinarum, quibus valde noxia, in Ins. Philippinis. — Scl. philippinensi affinis sed notis datis magis elongata et habitu graciliori, diversa.

BASIDIOPHORA Roze et Cornu - Syll. VII p. 239, IX p. 342.

Basidiophora Kellermanni (Ell. et Halst.) — Syll. IX p. 342 — var. 3568 paupercula Peck, N.Y. State Mus. Bull. 150 [1910] p. 64 (1911).—
 A typo differt maculis paucis, parvis, sparsioribus, candidis; oosporis globosis minoribus, 20-24 μ diam.

Hab. in foliis vivis Ivae xanthifoliae [Compositae], Ohama, New Mexico, Amer. bor. (W. T. SWINGLE).

## LABOULBENIOMYCETÆ PEYR. \*)

Syll. VIII p. 909, IX p. 1130, XIV p. 725, XVI p. 674, XVII p. 915, XXII p. 1.

DIMEROMYCES Thaxt. — Syll. XIV p. 725, XVI p. 674, XVII p. 915, XXII p. 7,

1. Dimeromyces Corynitis Thaxt., Proc. Amer. Acad. 1912, p. 157, 3570 Spez. Lab. Arg. fig. 55.

Hab. in elytris Corynitis ruficollis, La Plata Arg.— Ind. masc.: long. tot., incl. pede (16  $\mu$ ) 50-60  $\approx$  9; cellula append. 14-20  $\approx$  10-12; antheridium 35  $\mu$ , cell. ped. 9-18  $\approx$  6, venter 10  $\approx$  12.— Sporidia (intra perith.) 60  $\approx$  9; perith. 150-215  $\approx$  30-40; recept. ad apicem append., incl. pede, 80  $\approx$  100  $\mu$ .

Dimeromyces Anisolabis Thaxt., Proc. Amer. Accad. 1912, p. 156. 3571
 Speg., Lab. Arg. fig. 54.

Hab. in superf. inf. abdominis Anisolabis anulipedis, Palermo et La Plata, Argent.—Indiv. masc.: long. tot. ad apicem antheridii (cum pede) 58; appendix 20  $\mu$ ; recept. excluso pede 18-20  $\mu$ , antherid. incl. cellula ped. 31  $\times$  8.— Ind. fem.: perith. 75-100  $\times$  14; recept., excluso pede, 25-30  $\times$  20; appendix primaria 40  $\mu$  app. inferiores, cellula fulcrante incl., 60-70  $\mu$ ; long. tot. ad apicem perith., incluso pede, 100,150  $\mu$ .

3. Dimeromyces Homophoetae Thaxt., Laboulb. in Chrysom. 1914, p. 19. 3572 Hab. in prothorace et antennis Homophoetae a equinoctialis, Guatemala, Grenada ex Antill., Trinidad. — Ind. masc.: long. total. ad apicem append. 60 μ, ad apicem antheridii 80 μ et antheridii proliferi 112 μ; antherid. normale cum pede 35-40 × 6.

<sup>\*)</sup> Cfr. praeter Contributiones Thaxterianas, illas aeque eximias de Laboulbenialibus italicis et exoticis el. prof. CAROLI SPEGAZZINI, imprimis vero ejus monographiam: Revision de las Laboulbeniaceas Argentinas, in Anal. del Mus. Nac. Hist. Nat. de Buenos Aires, tom. XXIX (1917) iconibus praeclaris et speciebus permultis novis ditissimam. Diagnoses latinae operis praetium augent. Tamen, ut olim monuit Saccardus, in determinandis his perquam singularibus plantulis icones maxime necessariae. Sincere fatemur expositionem sequentem e fontibus diversis haustam et tunc disparem, nonnisi ut inventarium specierum inservire posse.

3576

3577

Ind. fem.: sporidia  $32 \times 3.5$ ; perithec. cum pede  $100\text{-}190 \times 20\text{-}35$ ; longit. tot. incluso pede  $100\ 190 \times 20\text{-}35$ ; long. tot. appendicis primariae  $70\ \mu$ , ad apicem perithecii 140-250; appendix longior  $90\text{-}110\ \mu$ .

- 4. Dimeromyces Hermacophagae Thaxt., Laboulb. on Chrysom. 1914, p. 21. 3573 Hab. in antennis Hermaeophagae insularis, Grenada ins. Antill. (BINES). Ind. masc: long. tot. ad apicem appendicis 35 μ, ad apicem antheridii 50 μ. pes antheridii 16 μ, venter et rostrum 18; appendix 17 μ; Ind. fem.: perith., excluso pede, 60-70 μ; appendices secundariae 60-70 μ, primariae 20-25 μ; long. tot. ad apicem perith. 75-90 μ.
- 5. Dimeromyces Aulecophorae Thaxt., Laboulb. on Chrysom. 1914, p. 20. 3574

  Hab. in elytris Aulecophorae posticae, Perak Malacae—
  Ind masc.: recept. 32 × 10, excl pede; cellula basil. appendicis 16 × 6
  et pars dist. 30-40 × 4; antherid. cum pede 30-40 × 5-6, pes 11 µ long.—
  Ind. fem.: perith. 175-250 × 24-28; sporidia 32 × 30; recept. 65 × 20;
  cell. basil. appendicis primariae 20 × 6,5, append. longior 130 × 3,5.
- 6. Dimeromyces Longitarsi Thaxt., Laboulb. on Chrysom. 1914, p. 22. 3575

  Hab. in elytris Longitarsi testacei, L. subcincti, et Aphthonae Deyrollei, Arkansas, Am. bor. et Trinidad—
  Perith. 80-120 \* 20-25; appendix secundaria 85-100 μ, appendix primaria inclusa spina 25 μ.
- Dimeromyces brachiatus Thaxt., Proc. Amer. Acad. 1915, p. 6.
   Hab. in elytris Heterophagae sp., Peradeniya Ceylon.—
   Ind. mas.: receptac. 46 × 12; pes 18 μ; appendices 28 × 4; antheridium 27 × 9.— Ind. fem.: perithec. 90·120 × 15·20, cell. basil. 12 × 8; receptac. 18·22 × 4; axis secundarius 580 × 12, appendix 20·28 × 4.
   Dimeromyces Petchi Thaxt., Proc. Amer. Acad. 1915, p. 7.
  - Hab. in prothorace Tachys (1) minutae speciei, Peradeniya Ceylon (PETCH). Ind. masc. recept., incluso pede et cellula basilari primariae append.,  $45-80 \times 15-20$ , antheridia  $28 \times 9$ ; ind. fem. sporidia  $30 \times 4$ ; perithecia  $75 \times 20-24$ ; receptaculum  $55-65 \times 25$ ; appendices  $40-45 \times 7-8$ ; long. tot. ad apicem perithecii 120-135.
- 9. Dimeromyces appressus Thaxt., Proc. Amer. Acad 1915, p. 8.

  Hab. in superficie infer. abdominis et in forcipe Labiae pilicornis, Peradeniya Ceylon Ind. masc.: recept. excluso pede 10 × 9; antherid. 18 × 6; appendix 20·24; longit. tot. ad apicem appendicis 30 μ.—Ind. fem.: perith. 45 × 12 pars ascig., pes 70-80 × 10; sporidia 28 × 2,5; receptac. inclusa cellula basil. 20 × 10; appendix primaria excl. cellula basil. 12·16 × 5; appendix secundaria 35·45 × 5,5.

10. Dimeromyces Lavagnej Picard, Bull. Scient. France Belgique 50., 3579 1910-1917, p. 441. Descriptio ex Maire, III. Contrib. étude Laboulb. Afrique du Nord, Alger 1920, p. 6, fig. 1. - Dilutissime lutescens . receptaculi contorti, 5-cellulares (73 µ long.), cellula basali obconica, ungue nigro basi hyalino, apice hyalino-punctato praedita, septo primo transversali, cellula subbasali triangulari, appendicem primariam gerenti: cellulis distalibus 3, subquadrangularibus, septis obliquis praeditis, quaque appendices secundarias 2 gerenti; app, primariae breves (40 × 6), 4-cell., cellula basali triangulari minuta, cellulis mediis subelongatis parvis, cellula distali paullulum dilatata, elongata, subcompressa, apice rotundata; app. secundariae longiusculae (63-108 µ), perithecii apicem vix attingentes, angustae lineares, geminatae, cellula basali inflata, cellulis mediis cylindricis, cellula subterminali rigida, atrofusca, cellula distali longissima, flexuosa, compressa, sensim attenuata, apice obtusa; perithecio sessili, asymmetrico, curvulo, apice in rostrum brevem abruptiuscule attenuato; ostiolo rotundato regulari; cellula ascogenica elongata laterali; ascosporae fusiformes, 30 × 3.5, 1-septatae, basi rotundatae, cellula superiore inferiore quintuplo longiore, calvptra gelatinosa septum non attingenti praedita. - Totus 167 μ long.

Hab. in Microleste minutulo, Lattes Herault Gallia (LAVAGNE), nec non in M. laevipenni, prope Hipponem Numidia.

11. Dimeromyces Taxteri Maire, Bull. Soc. Hist. Nat. Afrique du Nord, 3580 t. VII 1914 p. 100, - Syn. Dimeromyces falcatus Thaxt., Proc. Amer. Acad. 1915, p. 4, non Paoli 1911.

Hab. in antennis Grylli mitrati, Semarang, Java. - Ind. masc.: long: tot., inclusa appendicis cellula term. (12-15 u) et pede (25  $\mu$ ) 80-94  $\star$  8; antheridium incluso pede 40  $\star$  5; ind. fem.: perith. 85-100 \* 20-24; sporida fem. 18 \* 3; long. tot. ad apicem append. 350-390  $\mu$ ; recept. 80  $\approx$  20 e facie 30  $\mu$ ; append. secund. 45 70  $\mu$ .

12. Dimeromyces Bordei R. Maire, Bull. Soc. Hist. Nat. Afrique du 3581 Nord, t. 11., 1920, Extr. p. 4, tab. I fig. 1-5. - Fungo masculo (totus 65-75 alt.) dilutissime rufo-brunneo; receptaculo e 3 cellulis obliquis contexto; cellula basali elongata obconica; cellulis superioribus subaequalibus, 2 antheridia composita et appendicem terminalem bicellularem, conicam, apice acutiuscula, antheridium superiorem subaequantem, hyalinam, gerentibus. Antheridiorum hyalinorum, lageniformium, in collum breviusculum rectum v. curvatum abruptiuscule contractorum pedicellis unicellularibus, dilu-

tissime rufo-brunneis, brevibus, cum cellulis vicinis concrescentibus. Fungi foeminei (tot. 160-200 \mu alt.) concoloris receptaculo e 3 cellulis valde obliquis, contexto; cellula basali paullum elongata, cellulis superioribus brevioribus subaequalibus; cellula subbasali appendicem secundariam ventralem, erectam, hyalinam, flagelliformem, 4-6 cellularem, 2/3 ad 3/4 perithecii aequantem, basi cum cellula receptaculi distali et cum perithecio concrescentem, gerenti. Perithecii fusiformi-incurvati, asymmetrici, pedicello mox cum cellulis basalibus confuso, indistincto; perithecio apice in rostrum breviusculum ostiolum obtusum subhyalinum gerentem sensim attenuato, infra ostiolum et rostrum vix constricto; cellula ascogenica unica; ascosporis homomorphis, fusiformibus, hyalinis, laevibus, utrinque, acutis, 1-septatis, muco praeter apicem cellulae inferioris obvolutis; ascosporae cellula inferiori 1/4 cellulae superioris aequanti.

Hab. in elytris Thy a midis parvulae Payk., prope Hipponem Reg. Numidiae, Africa bor.

13. Dimeromyces Kamerunensis Thaxter, Proc. Amer. Ac. of Sc. 53., 3582

1918, p. 700. — ♂ Exiguus, hyalinus dein leniter brunneo tinctus, axis tricellularis, cellulis parum longioribus quam crassioribus; antheridium unicum, raro duo, ventricosus, e parte distali curvula sensim augustatus 30 ≈ 8, pede nigro crassiusculo; appendices 20-4 ≈ 4.

♀ Axis receptaculi supra brunneum infra hyalinum, e 6-12 (v. ultra) cellulis superpositis efformatum, cellula basali pluries longiori quam crassiori sed basim versus leniter angustata; appendicibus erectis v. leniter divergentibus, demum obscure brunneis; peritheciis 1-2, uniformiter pallide flavido-brunneis, apice hyalinis appendicibus subaequantibus v. subbrevioribus 88-105 ≈ 14-21, appendicibus 105 ≈ 12, appendicibus primariis circ. 25 ≈ 3.

Hab. ad capitem et crura Oscinidae (Diptera) cujusdam, Kamerun Africa trop — Proxima D. coarctati.

14. Dimeromyces Oscinosomalis Thaxter, Proc. Amer. Ac. of Sc., 53., 3583 1918, p. 701. Τρerfecte hyalinus parietibus tenuibus praeditus, et tunc aegre visibilis, e tribus cellulis superpositis, inferiori latiori et infra parum inflata efformatus. Antheridiis unum v. duobus oblique superpositis, leniter divergentibus, receptaculo 25 μ, antheridio 18 × 5. — Ψ habitu sigmoidea. Axe receptaculi plerumque ex sex cellulis efformato, basali longiori quam latiori infra rhizoideo; appendicibus secundariis plerumque tribus raro quatuor, longis gracilibus demum obscure brunneis; peritheciis plerumque simpli eibus, 50-65 × 16-20; receptaculo, processu rhizoideo excepto, 35-50

\* 12-16; appendicibus primariis 18 μ, secundariis usque 125 \* 8. totus fungus 75.95 µ long.

Hab. in inferiori parte abdominis Oscinosomae inaeq n a l i (Diptera), Sarawak Borneo. - D. pedali et rhizophoro proxima species; sed differt a pedali processu rhizoideo et forma termi. natione peritheciali, a rhizophoro appendicibus longioribus processu rhizoideo simplici, etc.

15. Dimeromyces pedalis Thaxter, Proc. Amer. Ac. of. Sc., 53., 1918, 3584 p. 699. - A Hyalinus, axis tricellularis, cellula basilari latiori pede nigro bene evoluto praedita, caeteris angustioribus subaequalibus; antheridio erecto, e apice 28 µ longo 8 µ cr., antheridio proprio 18 ≈ 5, appendicibus 18 ≈ 3. Q Tota, sed praecipue appendices plus minus brunneo-flavido tinctae; axis receptaculi plerumque 8-cellularis utrinque parum acutato; appendices primariae erectae terminales septo obscuro divisae, secundariae plerumque quatuor quandoque tres, breviusculae; perithecium 42-52 × 14; receptaculum 35-40 × 8; sporis 18 × 2,5; appendices primariae 30 μ, secundariae 40-50 μ.

Hab. ad crura Oscinosomae inaequalis (Diptera), Sarawak Borneo. - Species inter D. Oscinosomalis et D. coarctatus media.

EUDIMEROMYCES R. Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, p. 215. TEx tribus cellulis superpositis ab antheridio simplici terminatis efformatus; Q appendices primariae a receptaculo non distinctae, secundariae steriles nullae. Coeterum ut in Dimeromyces cui affinis.

1. Eudimeromyces Chiliotis R. Thaxter, l. c. p. 216. - 7, gracilis hya- 3585 linus tribus cellulis longitudine et crassitudine subconformibus, antheridio conoideo 12  $\mu$  long.; totus cum pede  $25 \times 4$ . —  $\bigcirc$  Hyalina; receptaculo e cellula basilari et plerumque e 4 cellulis subtransverse dispositis efformato; peritheciis pedicello incluso 65-75 ★ 14-15, sporis 20 ★ 2,6; receptaculo 14-17.★ 11-13; appendicibus longis 110-120 » 8. Totus fungus ex apice perithecii 80-100 μ long.

Hab. in elytra Chiliotis formosi, Baños de Apoquindo et Corral, Chile, America austr.

DIMORPHOMYCES Thaxt. - Syll. XI p. 446, XIV p. 725, XVI p. 674.

1. Dimorphomyces platensis Speg., Lab. Arg. p. 517 fig. 60 - Masculus 3586 pallidus, appendice obtusiuscula, antheridio hyalino acute rostrato patente. Foemineus totus subincarnato-melleus, axi primario 2-mero, ramo laterali unico e margine interno 5-8-cellulifero, dentibus non-

nullis cellula fusca subglobosa v. appendice 3-5-mera gracili subpallida v. perithecio coronatis; perithecio erecto, recto v. subsigmoideo e clavato subfusoideo subrufescente superne infuscato lineola transversa ab ostiolo late conico separato.

Hab. in toto corpore A pocelli parvipennis, La Plata — Antherid. 50 × 10 (mas); perith. 30-125 × 20-28 (foem.).

2. Dimorphomyces Trogophicei Speg., Lab. Arg. p. 519 fig. 61. — Masser sculus ignotus. Foemineus parvus patentim bifidus, axi primario sterili minuto bicellulari obscure fumoso, secundariis vix fumosis appendicibus plurimis versiformibus ornatis; peritheciis subcylindraceis sursum infuscatis linea transversa tenui strangulata ab ostiolo subconico crassissimo fere truncato limitatis.

Hab. in abdomine Trogophloei tenuipuncti, in ins. Santiago, La Plata, Argent. — Alt. tot. 95-110  $\mu$ ; perith. 55-65  $\approx$  18-20.

3. Dimorphomyces vulgatissimus Speg., Lab. Arg. p. 520 fig. 63. — Massculus parvus pallide rubescenti-fumosus, appendice 4-5 mera acuta, antheridio ovato longe tenuiterque attenuato-rostrato. Foemineus magnus plus minusve patentini bifidus, axi primario centrali 2-3 articulato fusco, ramis lateralibus adscendentibus v. patulo-reflexis, margine interno 7-15 cellulosis, ibique appendic. brevibus crassis fuscis v. elongatis filiformibus pallidis v. peritheciis nonnullis onnstis; perithec. cylindraceo-obclavatis, rubescenti-fuligineis in parte crassiore supera praecipue, apice conoideo attenuato, obtuse acutatis.

Hab. pervulgatus in toto corpore Apocelli Argentini, A. Mendozani et A. opaci, Montevideo, San Luis et La Plata — Anther. 33-40 × 12 (mas), perith. 175-200 × 22-25 (foem.).

4. Dimorphomyces argentinensis Speg., Laboulb. Argent. in Anal. Mus. 3589
Nac. Buenos Aires, XXIII p. 187 (1912) fig. 14. — Totus melleus;
receptaculis saepius plus minusve scorpioideis, masculis minoribus
plerumque 2-4-antheridiferis, foemineis majoribus 2-12-perithecigeris; peritheciis lanceolato-conoideis, 75-80 × 15-20, ostiolis attenuatorotundatis.

Hab. in Myrmedonia argentina?, La Plata, Argentina — D. Myrmedoniae Thaxt. proximus.

5. Dimorphomyces Meronevae Thaxt., New or crt. Laboulb. f. Argent., 3590 Proc. Amer. Acad. 1912, p.158.—Ind. masc.: recept. cum pede  $40 \approx 23$ ; appendix 17  $\mu$ ; antherid. 32-35  $\mu$ , rostrum 15, venter 10  $\mu$ , cellula ped. 9  $\mu$ . — Perith. 65-70  $\approx$  12-15; sporidia (intra perith.) 14  $\approx$  1-5;

receptac. cum pede 18  $\mu$ ; recept. secundarium 18-35  $\mu$ ; append. primariae 18 \* 9.

Hab. in artubus Meronevae Sharpi, Temperley Buenos Aires, La Plata Argent., socio Monoicomycete nigrescenti — Teste Speg., Lab. Arg. (1917), p. 517 n. 59 cum ic., D. Meronevae a D. argentinensi non differt.

6. Dimorphomyces verticalis Thaxt., Proc. Amer. Acad. 1912, p. 159, 3591
Speg. Lab. Arg. fig. 62.

Hab. in insecto A t h e t a sp., Palermo et Sta Catalina Argent.— Indiv. masc.; long. tot. cum pede 60  $\mu$ , antherid. cum cellula ped. 35  $\mu$ , rostrum 8, appendix 20-30  $\mu$ ; indiv. fem. perith. 75-100  $\approx$  15-20; appendices secundariae 25-30; long. total. ad apicem perith. altioris 100-200  $\mu$ , ad apicem recept. secund. 75-120.

#### RICKIA Cavara - Syll. XVI p. 689, XXII p. 7.

1 Rickia argentinensis Speg., Laboulb. Arg. p. 664 fig. 194. — Palli- 3592 dissime mellea, parva, simplex, cellulis receptaculi 5-6, basali brevi subcylindracea, caeteris tristiche dispositis, 2 dorsalibus 3 ventralibus etiam superpositis et 2 centralibus collateralibus basi dorsoque perithecii adnatis, perithecio apicali ovato ultra medium exerto et libero.

Hab. in dorso abdominis Trogophloei bilineati in ins. Santiago La Plata — Perithecia  $50-60 \times 28-30$ ; alt. tot.  $75-100 \times 30-35$ .

2. Rickia formicicola Speg., Laboulb. Arg. p. 665 fig. 195. — Parvula, 3593 subhyalina, receptaculo minimo, cellula basali subcylindracea brevi, cellulis receptacularibus, dorsalibus ternis dorso perithecii adnatis, suprema appendice setuliformi fusca apice capitata producta, ventralibus augustis tristichis, omnibus cellula altera appendice etiam setuliformi apice capitata praeditis, perithecio sublageniformi inaequilaterali ovato gross umbonato ostiolo obliquo obtuso subbilabiato donato.

Hab. in abdomine Psenolepidis Silvestrii in insula Santiago La Plata — Perith.  $32-40 \times 20-22$ ; append.  $40-70 \mu$ ; alt. tot.  $55-60 \mu$ .

3. Rickia perpusilla Speg., Laboulb. Arg. p. 666 fig. 197. — Perpusilla, 3594 tota hyalina; cellula basali mediocri obconica; cellulis receptacularibus tristichis; serie infera dimera, articulo basali subelliptico connato, supero conico-mucroniformi libero; serie secunda v. intermedia etiam dimera, articulis connatis, apice in androsticho 7-8

mero appendiciformi elongato gracili, cujus cellulis duabus inferis majoribus quarum superiore 1-antheridifera; serie tertia 1-mera basi et dorso adnata, superne cellulis 2 collateralibus connatis subpedicelliformibus coronata; perithecio cellulis praecedentibus insidente, omnino libero, ellipsoideo recto obtuso minute ostiolato.

Hab. in elytris Phalacri sp.?, frequens Sta Catalina B. A. et La Plata. — Perith.  $30-35 \times 13-14$ ; alt. tot.  $60-70 \times 10-12$  (excl. append.).

4. Rickia platensis Speg., Laboulb. Arg. p. 667 fig. 198. — Parvula, 3595 hyalina; cellula basali subturbinata. mediocris; cellulis receptacularibus tristichis, serie dorsali extima 10-15-mera, sursum libera caudiformi patentiuscula, perithecium plus minusve superante; serie intermedia 5-7-mera, praecedenti sequenti nec non perithecio adnata, articulis superis paraphysibus filiformibus brevibus nonnullis v. antheridio uno alterove praeditis; serie tertia intima seu ventrali 3-mera, cum perithecio ceterisque connata; perithecio ovato, recto v. inaequilaterali, superne sensim conico-attenuato, apice obtuso minute ostiolato.

Hab. in elytris Europis vicini, Sta Calatina B. A. Argent. — Perith.  $4050 \times 22-25$ ; alt. tot.  $70-100 \times 32-35$ .

5. Rickia pumila Speg., Laboulb. Arg. p. 668 fig. 199. — Pusilla, tota 3596 hyalina, cellula basali subturbinata pro ratione majuscula; cellulis receptacularibus tristichis, serie externa dorsali 10-12-mera, sursum libera caudiformi perithecium duplo superante, serie intermedia 4-6-mera praecedenti sequenti perithecioque adnata, articulis 1 v. 2 superis antheridio uno alterove praeditis, serie tertia intima seu ventrali 2-3 mera perithecio caeterisque confluente; perithecio ovato superne subcoarctato obtuse breviterque conico-ostiolata.

Hab. in elytris Orthopteri cujusdam (Sacium?), Sta Catalina B. A., Argentina — Perithecia 22-25  $\approx$  13-15; alt. tot. 75-85  $\mu$ .

6. Rickia rhacomycoides Speg., Lab. Arg. p. 669 fig. 200. — Submaju- 3597 scula, receptaculo obconoideo, cellulis omnibus arcte adnatis obscure tetrastichis, centro fumoso, margine atro squamoso, perithecio magno elliptico-conico acuto, ostiolo vix manifesto.

Hab. in elytris Seydmaenidei cujusdam in ins. Santiago, La Plata, Argent.—Perithecia 80-90 × 38-42; receptaculum 90-110 × 38-45.

7. Rickia Coprighis Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 3598
Buenos Aires, XXVI (1916) p. 507 fig. 47. — Parvula, 75-100 >

25-35, hyalina; stipite unicellulari subcylindraceo,  $20\text{-}30 \times 10$ , apice cellulas binas sustinente, cellula ventrali cellula altera coronata superne in perithecio ovoideo  $30\text{-}35 \times 12\text{-}15$  producta, e latere antheridio ornata; cellula autem dorsali seriebus duabus heptameris cellularum superpositarum aucta, series interna  $50~\mu$ , externa  $60~\mu$  longa, series externa inter dentes seu sinus antheridios abortivos, basi nigro-annulatos praebente.

Hab. in Coprighis cultratello (ex Acaridis) in ins. Java (A. Berlese). — R. minutae Paoli certe affinis, sed habitat et loco, nec non notis peculiaribus nonnullis distincta.

8. Rickia Jacobsoni Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 3599 Buenos Aires XXVI (1915) p. 508 fig. 48. — Majuscula, 175.200 μ alta, sat regularis, tota hyalina; cellula basali cylindracea 50-75 τ 10-15; cellulis in receptaculo tristichis, serie prima 4-mera perithecium ovatum 65-80 τ 30-40 fulcente, secunda interna dorso perithecii adnata 11-12-mera, tertia vel dorsali externa etiam 11-12-mera, latere altero serie centrali adnata, altero dense tristiche antheridifera, ambabus apice in cornu crasso brevi 4-5-cellulari obtuso confluentibus; antheridiis numerosissimis, psallio nigro pusillo ornatis.

Hab. in Megalolaepas Nederweni in ins. Java (leg. JACOBSON, comm. A. BERLESE) — Statura majuscula, cornu apicali, etc. bene distincta.

9. Rickia Silvestrii Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 3600 Buenos Aires XXVI (1915) p. 509 fig. 49. — Pusilla, 75-80 μ alta, tota hyalina; cellula basali cylindracea, sursum dilatata, 20 μ alta; cellulis receptaculi distichis, serie altera bicellulari perithecium ovatum 40-45 × 20-22 fulcente, altera 6-7-mera, dorso perithecii adnata et breviore, margine externo paraphysibus bacillaribus 5-6, erectiusculis, 40-50 × 3, basi psallio minuto nigro ornatis donata.

Hab. in Hypoaspide Spegazzinii Berl., Mayabal, Erythraea (F. SILVESTEI). — Ad genus Distichomyces transit.

10. Rickia Peyerimhoffii Maire, Bull. Scient. Fr. et Belg., t. 49., 1916, 3601 p. 290, cum icon., et III. Contrib. étude Laboulb. Afrique du Nord, Alger. 1920, p. 9. — Majuscula subregularis, cellula basali hyalina excepta mellea, cellulis in receptáculo tristichis, basalibus brunneo-suffusis, serie anteriore 20-23-mera, perithecio 8-10 cellulis adnata, serie posteriore 19-20-mera in appendicem primariam supra medium peritheciorum desinente, utraque extus appendici-et antheridifera; serie centrali 16-18-mera cellulis 8-9 dorso perithecii ad-

nata, supra appendicem primariam ad quartum superiorem perithecii desinente. Appendicibus cum antheridiis in parvos greges (2-3) congregatis, basi psallio nigro hypocrateriformi instructis; appendicibus subhyalinis complanatis, hospiti adpressis, linearibus v. spathulatis, antheridiis subaequilongis; antheridiis lageniformibus plerumque curvulis, rostro brunneo suffuso, ventre ex hyalino brunneolo, simplicibus. Perithecio ellipsoideo-oblongo, apice brunneo-suffuso et maculis atris 2 notato, non constricto, ostiolo subhyalino. Ascosporis inter 1/4 et 1/3 inferiorem septatis, hyalinis, laevibus, muco obvolutis.

Hab. in prothorace Scaphosomatis agaricini L. et flavonotati Pic, prope Kolea et C. Bône, in Algeria et Mauretania, Africa bor.

Rickia Lispini Thaxt., Proc. Amer. Acad. 1912 p. 160, Speg. Lab. 3602
 Arg. fig. 196.

Hab. in abdomine etc. L is p i n i t e n e l l i, Sta Catalina, Buenos Aires, La Plata (SPEG.), Llavallol Argent. nec non Los Amates Guatemala. — Sporidia  $28 \times 4$ ; perithec.  $40.50 \times 27.31$ ; receptac.  $60.75 \times 28.35$ ; appendices  $20.55 \mu$ ; long. tot. 75.120.

- 12. Rickia Melanophthalmae Thaxt., Proc. Amer. Acad. 1912, p. 161. 3603 Hab. in elytris minutae spec. Melanophthalmae, Llavallol Argent. Perith. 35-43  $\times$  23; sporidia 40  $\times$  2,5; recept. 40  $\times$  27-31; longit. tot. 75-85  $\mu$ .
- 13. Rickia furcata Thaxt., Proc. Amer. Acad. 1912 p. 366. Furcata 3604 v. irregulariter ramosa; appendicibus subcylindricis  $8\cdot 16 \approx 2,5$ ; perithecio 30-40  $\approx 8\cdot 10$ , incluso apiculo (2,5·3 longo); sporis  $25 \approx 2,5$ ; longitudo tot. usque ad apicem perithecii 40-70  $\mu$ , ad apicem rami posterioris 50-175  $\mu$ .

Hab. in insecto Euzerconis sp., Trinidad, Manaos Amos. Granada W. J.

14. Rickia arachnoidea Thaxt., Proc. Amer. Acad. 1912 p. 367. — Rescaptaculo sursum in ramulos saepius furcatos, arachnoideos diviso; appendicibus brunneolis, 7-18  $\pm$  4; peritheciis 70  $\pm$  18-20; sporis 30  $\pm$  3; ramis 8-10  $\mu$  cr., longioribus usque ad 460-520  $\mu$  long., cellula basilari et subjuncta appendicis primariae 18-20  $\pm$  4.

Hab. in insecto Discopomae, sp., Euzerconis sp., Trach y uropodae, Trinidad.

15. Rickia Discopomae Thaxt., Proc. Amer. Acad. 1912 p 369. — Hya-3606 lina demum brunneola; peritheciis 48-52 × 18-25; sporis 30 × 5; appendicibus 7-10 × 3-4; longitudo totalis 250-350 × 18-32 (e basi

perithecii).

Hab. in superficie sup. Discopomae sp., Peradeniya, Ceylon.

16. Rickia elegans Thaxt., Proc. Amer. Acad. 1912, p. 370. — Recta 3607 v. curvula, basim versus sensim angustata; perithecio 65-85 × 20; appendicibus 15 × 4; longitudo totalis 200-220 × 35-40.

Hab. in artubus et corporis margine Discopomae sp., Peradeniya, Ceylon.

17. Rickia pulchra Thaxt., Proc. Amer. Acad. 1912, p. 371. — Cellula 3608 basilari varie evoluta, breviuscula, 18 50 × 6-15; appendicibus 35-60 × 4-6; peritheciis 35-40 × 15; sporis 22 × 3,5; longitudo totalis, excluso pedicello, 48-56 × 35-38.

Hab. in superficie inferiore et artubus Macrocheles et Celaenopsis, Kamerun Africae.

18. Rickia obcordata Thaxt., Proc. Amer. Acad. 1912, p. 372. — Hya-3609 lina; cellula basilari, incluso pede, 28-35 × 15·18; perithecio 60 × 25; appendicibus 24-35 × 5; antheridiis emergentibus 12 μ; corpore subobcordato 90-100 × 78-85.

Hab. in Insecto cujusd. minuto (ex Coleopt.), Kamerun Africae.

19. Rickia elliptica Thaxt., Proc. Amer. Acad. 1912, p. 373. — Hya-3610 lina ambitu subelliptica; cellula basilari, incluso pede, 8-16  $\mu$  longa; perithecio 30-40 \* 10-12, excluso processu (7 \* 2); sporis  $22 \times 2,5$ ; corporis long. totalis 50-66  $\times$  35-40.

Hab. in artubus Discopomae sp., Trinidad.

20. Rickia inclinata Thaxt, Proc. Amer. Acad. 1912, p. 374 — Mi- 3611 nuta hyalina irregulariter rotundata; cellula basilari 25 × 8 (incluso pede); perithecio 38-40 × 11; sporis 25 × 3; appendicibus hyalinis, leviter tenuatis, 16 × 3, septo basali manifestissimo; long. tot. corporis ad apicem perithecii 50 × 41-44.

Hab. in Insecto cujusd. minuto indet. (ex Coleopt.), Trinidad.

21. Rickia Celaenopsis Thaxt., Proc. Amer. Acad. 1912, p. 375. — 3612 Hyalina, minuta, ambitu subangulosa; cellula basilari  $25 \times 8$ , incluso pede; perithecio  $40 \times 20$ ; sporis  $20 \times 3$ ; antheridio  $12 \mu$  longo; longitudo tot. ad apicem perithecii  $50 \times 38$ .

Hab. in artubus Celaenopsis sp., Trinidad.

22. Rickia discreta Thaxt., Proc. Amer. Acad. 1912, p. 375. — Hya-3613 lina, elengata; appendicibus flavidis, subcylindricis, anulo basilari nigro conspicuo, 15-25 × 3,5; primaria 30-45, cellulis basilaribus binis 10 × 4; peritheciis 25 × 9; cellula basilari 20 × 7, incluso pede; totali longit, ad apicem perithecii 55-65 × 18-22.

Hab. in Gamaside, Trinidad.

23. Rickia spathulata Thaxt., Proc. Amer. Acad. 1912, p. 376. — Ambitu (excepto vertice perithecii) spathulata; perithecio 40-46 × 16-20; cellula basilari, incluso pede, 28-33 × 9-11; sporis 28 × 3; appendicibus 6 × 2, fumoso-brunneis, facile deciduis; longit. total., excl. appendice primaria, 12-16 × 6-8.

Hab. in artubus Celaenopsis, Amazonia.

24. Rickia excavata Thaxt., Proc. Amer. Acad. 1912, p. 377. — Sub- 3614 triangularis; subconcava; sporis 18 × 3; perithecio 30 × 10; appendicibus subcylindraceis, minutis, 6 × 2,5; cellula basilari 20 × 6; longit. total. ad verticem perithecii 75 × 34, exclusa cellula basilari appendicis primariae.

Hab. in Insecto Celaenopsis, Trinidad.

25. Rickia euzerconalis Thaxt., Proc. Amer. Acad. 1912, p. 378. — 3615 Breviter spathulata hyalina perithecio angusto erecto vertice extus libero, 22-24 × 8; sporis 25 × 2,5; appendicibus obtusis, flavido-brunneis 7 × 3,5; sporis 25 × 2,5; cellula basilari 14-16 × 6-8; longit. total. ad verticem perithecii 50-70 × 24-32; cellulis binis appendicis primariae 12-15 × 5.

Hab. in Insecto, Euzerconis sp., Kamerun Africae.

26. Rickia Megisthoni Thaxt., Proc. Amer. Acad. 1912, p. 379. — Hya-3616 lina; appendicibus brevissimis, minutis  $5 \times 2.5$ ; sporis  $20 \times 2$ ; peritheciis  $30-32 \times 8-11$ ; cellula basilari  $16 \times 7$ , incluso pede; longit. tot. ad verticem perithecii  $50-60 \times 20$ .

Hab. in Insecto Megisthani sp., Trinidad.

27. Rickia kamerunana Thaxt., Proc. Amer. Acad. 1912, p. 380 — Hya-3617 lina, asymmetrica; appendicibus brevibus, obtusis,  $10 \times 3$ ; sporis  $18-20 \times 2$ ; perithecio;  $30-34 \times 6-8$ ; cellula basilari, excluso pede  $8 \mu$  longa; cellulis binis basilaribus appendicis primariae  $8 \mu$ ; longit. total. ad verticem perithecii  $40 \times 20$ .

Hab. in Insecto Euzerconis sp., Kamerun, Africae.

28. Rickia filifera Thaxt., Proc. Amer. Acad. 1912, p. 381. — Minuta, 3618 gracilis; appendicibus gracilibus, cylindraceis, hyalinis, 10 × 2; sporis 24 × 2,5; peritheciis 35-45 × 8-12; cellula basilari, incluso pede, 12 × 4,5; long tot. ad verticem perithecii 35-45 \* 8-12; flagello libero longiore 175 μ longo.

Hab. in Coleoptero majusculo, Magistkano affini, Passali, Kamerun Africae.

29. Rickia rostrata Thaxt., Proc. Amer. Acad. 1915, p. 10. 3619

Hab. in elytra dextera Tanygnathi ruficollis, Java
et Saraw Borneo. — Sporidia 20 × 7,5; venter perithecii, excl. cell.

20 Labonideniomycows, Lickis.	
margin. axis $42-48 \approx 25-28$ ; process. rostr. $63-72 \approx 10-12$ ; appendix	
secund. 24 × 3,5; longit. tot. ad apicem perith. 240-450 × 20-35.	
30. Rickia Tomari Thaut., Proc. Amer. Acad. 1915 p. 11.	362
Hab. in elytris Tomari sp., Peradeniya Ceylon Perith. 80-	
90 × 22-24; antheridia 10 × 3,5; long. tot. ad apicem perith. 135-	
150 × 30-36	
31. Rickia marginata Thaxt., Proc. Amer. Acad. 1915 p. 12.	362
Hab. in corpore Heterophagae punctulatae, Pera-	ขบอ
deniya Ceylon. — Perithec. 75-80 × 35-38; sporidia 46 × 4,5; recept.	
150-625 × 46-85; appendix later. 30-80 × 5; terminalis 300 × 8.	
32. Rickia coptengalis Thaxt., Proc. Amer. Acad. 1915 p. 13.	362
Hab. in Coptengi Shepardi in insula Djilolo Indo-Ma-	
layae - Perith. 100-112 × 28-30; long. tot. ad apicem perith. 450-	
500 μ, latit. 40 μ; antheridia 12 μ; appendix 8 μ.	
33. Rickia Onthofagi Thaxt., Proc. Amer. Acad. 1915 p. 15.	362
Hab. in abdomine Onthophagi sp. Peradeniya Ceylon	
Perithec. 65-100 × 28-35; sporid. 50 × 7 (intra perith.); antheridia	
$15 \times 5$ ; appendices $4 \times 3.5$ ; longit. total. ad apicem perith. 260-	
340 × 40-44.	
34. Rickia compressa Thaxt., Proc. Amer. Acad. 1915 p. 16.	362
Hab. in antennis et prothorace Leptochirisp. v. aff., Java	
(RONYER). — Perith. 60-75 × 20-22; recept. ad apicem appendicis	
primariae 140-155 $\mu$ ; appendix secundaria 20-40 $\approx$ 4-5; longit. tot.	
ad apicem perithecii 175-200 × 32-35.	30.
35. Rickia Uropodae Thaxt., Proc. Amer. Acad. 1915, p. 17.	362
Hab. in corpore Uropodae sp., Large Passali, Ins. Java	
(Thompson). — Perith. 60 × 18; pars basilaris appendicis prim.	
$16 \times 8$ , appendices secundariae $18 \times 9$ ; longit. total. $100-120 \times 30$ .	
36. Rickia uncinata Thaxt., Proc. Amer. Acad. 1915, p. 18.	362
Hab. in artubus Macrochelis sp., (Large Passali) Java	
(THOMPSON) Perith. 38-42 × 12-16; appendix primaria, inclusa	
basi, 24 $\mu$ ; appendix secundaria 12 $*$ 4; long. tot. 150-500 $*$ 10.	
37. Rickia nutans Thaxt., Proc. Amer. Acad. 1915 p. 19.	362
Hab. in apice abdominis Macrochelis, (Large Passali) Pe-	
radeniya Oeylon.— Perithecia 58-66 × 20; appendix apicalis 15-16 µ;	
longit. tot. 750, diam. circ. 12.	
	000
38. Rickia passalina Thaxt., Proc. Amer. Acad. 1916, p. 17.	362
Hab in insectis Passalo cornuto allisque spec., Kentucky,	
Para et Manaos Bras., Grande Etang Grenada, Dominica, Nica-	
ragua, Guatemala. — Sporidia 20 × 2,5; perith. 40 × 10, long. tot.	

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axeos  $150.900 \times 8.12$ ; appendices  $9.12 \times 2.5$ .

- 39. Rickia apiculifera Thaxt., Proc. Amer. Acad. 1915, p. 18.

  Hab. in Passalo tlascala et Neleida Antillarum, Grand Etang Grenada, Guatemala, Jucatan, Nicaragua. —
  Sporidia 25-28 × 3-4; perith. 30-50 × 10-16; long. tot. maxime varia
  100-1000 × 10 20; appendices 18-20 × 3,5.
- 40. Rickia bifida Thaxt., Proc. Amer. Acad. 1916, p. 19.
  Hab. in insect. variis ex Passalineis, Guatemala, Nicaragua, Rio de Janeiro, Amazonia. Sporidia, 28 × 2,5; perithec. 35-40 × 10, cellulae margin., 3,5 μ, pes 9 × 6-7; receptaculi pes 7-12 × 7-12; divisiones longiores 75-100 × 5,5 7; pars libera appendicis primariae 12-16 × 3,5-4; appendices 15-20 × 3.
- 41. Rickia dichotoma Thaxt., Proc. Amer. Acad. 1916, p. 20. Hab. in superf. super. E u z e r c o n i s speciei parasiticae in insectis P a s s a l i n e i s, Hayti. — Sporidia 30 × 3,5; perith. 55-65 × 14-18, cellulae marg. 7 μ; receptaculi pars basilari 45 × 30 × 12, eius divisiones longiores 250-675 μ.
- 42. Rickia Cornuti Thaxt., Proc. Amer. Acad. 1916, p. 21. Hab. in Passalo cornuto, Kentucky (HYATT). — Sporidia  $36 \times 4$ ; perith. 60 75 × 14-18, cellulae marg. 10  $\mu$ ; recept. pars basilari 18-27 × 25, ejus divisiones longiores 625 × 12; appendices 16-18 × 2,5-3,5, basis appendicis primariae 16-18 × 4,5 (in apice 1,8  $\mu$ ).
- 43. Rickia depauperata Thaxt., Proc. Amer. Acad. 1916, p. 22. Hab. in Celaenopsis sp., Hayti (MANN).— Sporidia  $18 \times 2$ ; perithecia  $20 \cdot 28 \times 7 \cdot 9$ ; long. tot. ad apicem perithecii  $35 \cdot 40 \times 19 \cdot 23$ ; appendices longiores  $7 \times 3.5$ .
- 44. Rickia dominicensis Thaxt., Proc. Amer. Acad. 1916, p. 23. Hab. in antennis Passali speciei majusculae, Dominica—Sporidia  $20 \times 2$ ; perith.  $36 \times 6$ ; pars opaca baseos  $26 \times 3.5$ ; long. tot. ad apicem perithecii  $50 \mu$ , ad apicem flagelli  $160 \cdot 190$ ; maxima latitudo  $15 \mu$ ; appendices  $15 \cdot 25 \times 3$ .
- 45. Rickia parvula Thaxt., Proc. Amer. Acad. 1916, p. 25.
  Hab. in Celaenopsis sp., St. Anns Valley Port of Spain Trinidad. Sporidia 16 \* 2; perith. 28 \* 9; long. tot. ad apicem perithecii 40 \* 18; basis primariae appendicis 10 \* 3,5.
- 46. Rickia radiata Thaxt., Proc. Amer. Acad. 1916, p. 25.

  Hab. in Celaenopsis sp., Kamerun. Sporidia 22 \* 2,5;
  perithecia 28 \* 11, antheridia 6.7; μ appendices longiores -24 \* 3,4;
  basis append. primariae 10.12 \* 3; processus ad cell. basil. 30.55;
  cell. basil. receptaculi 10.15 \* 5,5; long. tot. ad apicem perithecii

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4.0	0.0	- 36	7.0	· Z/O -

47. Rickia Hypoaspidis Thaxt., Proc. Amer. Acad. 1916, p. 27. Hab. in insectis Hypoaspidis sp, Grand Etang Grenada.—Sporidia  $18 \times 2.5$ ; perith.  $35 \times 12$ , cell. marg.  $3\mu$ ; appendices  $10.12 \times 3.4$ ; cellula, basil.  $10.12 \times 4.5.5$ ; long. tot. ad apicem perithecii  $55.65 \times 16.25$ .

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- 48. Rickia Euxesti Thaxt., Proc. Amer. Acad. 1916, p. 27.

  Hab. in insecto Euxesto Parki, Manila Ins. Philipp.—Sporidia 18-20 × 2,5; perith. 26-36 × 16-18; antheridia 18 × 3,5; long. tot. ad apicem perith. 50-90 × 20-26, in parvis exempl. 30 × 15.
- 49. Rickia Europsis Thaxt., Proc. Amer. Acad. 1916, p. 28.

  Hab. in insecto Europsis sp., Kamerun. Sporidia 24 × 3;
  perith. 40.54 × 16.18; appendices 6.9 × 4; antheridia 7 × 3,5; long.
  tot. ad apicem perith. 60.66 × 36.43.
- 50. Rickia gracilis Thaxt., Proc. Amer. Acad. 1916, p. 29.
  Hab. in insecto Stenotarso guineensi, Kamerun. —
  Sporidia 35 × 3,6; perith. 75 × 29; antherid. 14 × 4; appendices 10-20 × 3; long. tot. ad apicem perith. 450 × 34; recept. 26 μ.
- 51. Rickia danaëalis Thaxt., Proc. Amer. Acad. 1916, p. 30.
  Hab. in variis partibus Danaë senigalensis, Kamerun. Sporidia 36 × 3,6; perith. 75-95 × 28-32; antherid. 16 × 5-5,5; appendices, inf. 20 μ, super. 65 × 7; appendix primaria 75 μ, basis 18 × 10; long. tot. ad apicem perith. 120-190 × 45-60.
- 52. Rickia Scydmaeni Thaxt., Proc. Amer. Acad. 1916, p. 31.
  Hab. in superf. infer. Scydmaeni bicoloris, Kittery Point, Maine Amer. bor. Sporidia 30 × 3; perith. 18 × 4; appendices 18-22 × 5,5, antherid. 18 × 4; long. tot. ad apicem perithecii 150-160 × 35-38.
- 53. Rickia Stemotarsi Thaxt., Proc. Amer. Acad. 1916, p. 32.

  Hab. in elytris Stenotarsi guineensis, Kamerun Afr. occid. Sporidia 40 × 4; perith. 80-120 × 28-35; antheridia 22 × 4; appendices 22-46 × 4; long. tot. ad apicem perithecii 200-350 × 40-55.
- 54. Rickia latior Thaxt., Proc. Amer. Acad. 1916, p. 33.
  Hab. in clytris Stenotarsi guineensis, Kamerun. Sporidia 38 × 3,8; perith 80-90 × 27-30; antherid. 9 × 3,6; appendices 18-60 × 3,6; long. tot. ad apicem perithecii 48-70 μ.
- 55. Rickia introversa Thaxt., Proc. Amer. Acad. 1916, p. 34.
  Hab. in super. abdominis Copropori lati, Mindanao Ins.
  Philipp. Sporidia 18 \* 2; perith. 35-40 \* 11-13; appendices 6 \* 1,5; antheridia 12 \* 2.

56. Rickia nigrofimbriata Thaxt., Proc. Amer. Acad. 1916, p. 35. Hab. in apice abdominis Copropori lati, Mindanao Ins. Philipp. — Perith. $38 \times 10$ ; appendices $6 \times 2.5$ ; long. tot. $80 \times 24$ .	3646
57 Rickia inclusa Thaxt., Proc. Amer. Acad. 1916, p. 36.  Hab. in artubus Copropori lati, Mindanao Ins. Philipp.—  Sporidia copiosa, 28 × 2,5; perith. 77 × 27; long. tot. ad apicem perithecii 140 × 50.	3647
58. Rickia circumdata Thaxt., Proc. Amer. Acad. 1916, p. 37. Hab. in insecto Episcaphula piciventri, et Episcaphula sp., Kamerun. — Sporidia $28 \times 3$ ; perith. $54-64 \times 20$ ; appendices $12 \times 3$ ; antheridia $10 \times 3,5$ ; long. tot. ad apicem perithecii $130-175 \times 50-55$ .	3648
59. Rickia papuana Thaxt., Proc. Amer. Ac. 1916, p. 38. Hab. in insecto Calopsis sp., Nova Guinea Britannica. — Perithecia 75 × 24; antheridia 12 × 4; appendices 20 × 4; long. tota. ad apicem perithecii 235 × 90.	3649
60. Rickia pallida Thaxt., Proc. Amer. Acad. 1916, p. 39.  Hab. in insecto Amblyscelis sp., Kamerun. — Sporidia 42  4; perith. 15-22 × 5-6; long. tot. ad apicem perith. 200-275  80-85.	3650
61. Rickia Ancylopi Thaxt., Proc. Amer. Acad. 1916, p. 40.  Hab. in elytris Ancylopi bisignati, Kamerun — Sporidia 28 * 3; perith. 60-66 * 12-18; appendices 54 * 3,6; antheridia 11  * 4; long. tot. ad apicem perithecii 145-160 * 32-36.	3651
62. Rickia Episcaphae Thaxt, Proc. Amer. Acad. 1916, p. 41.  Hab. in insecto Episcapha antennata, Mindanao Ins. Philipp. — Sporidia 50 × 5; perith. 80-100 × 27-30; antheridia 16 × 4; appendices 10-20 × 2; longit. totalis ad apicem perithecii 310-425.	3652
63. Rickia Eumorphi Thaxt., Proc. Amer. Acad. 1916, p. 42.  Hab. in insecto Eumorpho cyanescenti, Mindanao Ins.  Philipp. — Sporidia 40 × 3,6; perith. 90-100 × 20-24; antheridia 20 × 4; appendices 80-90 × 4; long. tot. ad apicem perithecii 230-400 × 40-55.	3653
64. Rickia nigrescens Thaxt., Proc. Amer. Acad. 1916, p. 44.  Hab. in elytris Copropori hypocyploidis, Sarawak, Borneo, Manila Ins. Philipp. — Sporidia 35 × 2,5; antheridia 42 × 4; long. total. ad apicem perithecii 150-190 × 32-35.	3654
65. Rickia pallescens Thaxt., Proc. Amer. Acad. 1916, p. 45.  Hab. in artubus Copropori parvae speciei, Manila, Ins. Phi-	3655

84 Laboulbeniomycetæ, Rickia.	
lipp Sporidia 30 * 2,8; perithecia 68-75 * 18-22; antherida 15	
* 4; long. tot. ad apicem perithecii 150-200 * 35-45.	
66. Rickia Circopis Thaxt., Proc. Amer. Acad. 1916, p. 45.	365
Hab. in thorace inf. Circopis philippinensis, Kame-	
rnn Perith. 60-80 * 20-24; appendices 3,5 5,5 * 3,5; antheridia	
12 × 3,5; longit, tot. ad apicem perithecii 135-155 × 40-45.	
67. Rickia Episcaphulae Thaxt., Proc. Amer. Acad. 1916, p. 46.	365
Hab. in insecto Episcaphula sp., Kameran Perith. 50 *	
12-14; appendices 10 × 4; antheridia 12-16 × 4-5; long tot. ad api-	
cem perithecii 160-180 × 36-40.	
68. Rickia Saulae Thaxt., Proc. Amer. Acad. 1916, p. 47.	365
Hab. in insecto Saula sp., Mindanao Ins. Philipp Sporidia	
28 × 3; perithecia 60-65 × 25-28; long. tot. ad apicem perithecii	
150 $\mu$ ; antheridia 16 $\times$ 4.	
69. Rickia Phalacri Thaxt., Proc. Amer. Acad. 1916, p. 48.	365
Hab. in elytris Phalacri sp., Manila Ins. Philipp Sporidia	
$28 \times 2.5$ ; perith. $58.65 \times 16.18$ ; appendices $9.11 \times 3.5$ ; long. tot.	
ad apicem perithecii 135-175 v 18-20.	
70. Rickia sarawakensis Thaxt., Proc. Amer. Acad. 1916, p. 49.	366
Hab. in elytris Phalacri (?) sp., Sarawak Borneo. — Sporidia	
$28 \times 2.8$ ; perith. $45 \times 19$ ; appendices $10 \times 4$ ; antheridia $10 \times 3.5$ ;	
long. totalis ad apicem perithecii 95 v 10 12.	
71. Rickia Parasiti Thaxt., Proc. Amer. Acad. 1916, p. 49.	366
Hab in insecto Parasito sp., Mexico (MANN). — Sporidia 25	
\$2,5; perithecia 45-60 \$18-20; appendices 9-11 \$3; cellulae ba-	
silares 35 × 9; long. tot. ad apicem perithecii 90-125 × 26-36.	
	366
Hab. in alis Gryllotalpae sp., in Africa (MEARS). — Spori-	
dia $35 \times 3$ ; perithecia $75.85 \times 24.27$ ; antheridia $15 \mu$ ; appendices	
12-20 × 7,5; long. tot. ad apicem perithecii 230-325 × 28.	
	3663
Hab. in artubus Lycopodinae sp., Madagascar (WALSIN).—	
Perithecia 55 × 24-27; pars libera antheridii 15-20 μ; appendice	
$7.10 \approx 5.5$ ; long. tot. ad apicem perithecii 126-156 $\approx 40$ 45.	
	3664
Hab. in artubus et superf: infer. Zirophori sp., Port Spain	
et Ariona Trinidad. — Sporidia 35 × 3,5; perithecia 116 × 27; ap-	
pendices 40 × 4; long. tot. ad apicem perithecii 300-400 × 34-40.	
	3666
Hab. in insecto Leptaulax dentatus, Mindanao, Ins. Phi-	백분

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lipp. — Sporidia  $20 \times 2$ ; perith.  $30.36 \times 12.14$ ; recept. ad basim flagell.  $35.55 \times 18.20$ ; long. tot. ad apicem perithecii 55.80; flagellum longius  $225 \times 5$ .

76. Rickia pinnata Thaxt., Proc. Amer. Acad. 1917, p. 652.
Hab. in insecto Leptaulax dentatus, Mindanao, Ins. Philipp. — Sporidia 45 × 5; perith. 65-75 × 23-27; long. tot. ad apicem perithecii 500 × 20 28.

NYCTEROMYCES Thaxt., Proc. Amer. Acad. 1917, p. 653. — Ind. masc. e serie singula superpositarum cellularum constans; pes et cellula basilaris bene evoluta; cellulae minutae numero indefinito, gerentes antheridia composita et duas cellulas superpositas terminales, quarum superior particulariter conformata. Ind. femin. e cellula basilari bene evoluta et minuta cellula subbasilari constans; hac postrema appendicis e cellula pedunc. et altera terminali peculiari formatam gerens. Perithecii pes et cellulae basilares seriis non discretae, partem ascophoram limitantes. — Sporidia hyalodidyma, cellula ascogena singula.

1. Nycteromyces streblidinus Thaxt., l. c. p. 654.

3667

Hab. in abdomine super. et artubus. Streblae vespertilionis, in Vespertilionibus, Venezuela (CARRIKER). — Sporidia 42-45 \* 4; perith. cum pede 210 280 \* 36-45, apex 35-40  $\mu$ ; cellula basil. 70-90 \* 21, subbasilar. 10 \* 18; appendix 18 \* 14; cellula pedunc. 4 \* 16; long. total. ad apicem perithecii 290 360  $\mu$ .

DIANDROMYCES R. Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, p. 208.—
Axis receptaculi coincidens cum appendicibus, et ex cellulis superpositis efformatus; tres inferiores receptaculum proprium efformantes; cellula subbasalis duo antheridia symmetrice disposita efformans et duo perithecia gerens; appendices pluricellulares, quarum cellulae inferiores ramos efformant; antheridia e cellula pedicellari et basilari formata, cellulas antheridiales 4-5 gerentes.—
Affinis gen. Dichomyces, Monoicomyces, Dimeromyces.

Diandromyces chilenus R. Thaxter, l. c. — Flavo-brunneus Longi- 3668 tudo ad apicem perithecii 150-190 μ, perithecium supra cellula pedicellari 90-105 × 30-40; antheridia supra cellula pedicellari 35 μ; receptaculum circa 70 μ; sporae circ. 35 × 3; appendices 225 μ long.
 Hab. in Leptoglossa sculpticolli, Corral, Chile Ame-

rica merid.

- TETTIGOMYCES Thaxt., Proc. Am. Acad. 1915 p. 20. Receptaculum ex indefinita serie cellularum superpositarum compositum, cellulae 1-seriatae v. apicali longitrorsum partito; pes majusculus, niger arrhizus; appendix discreta v. mera receptaculi continuatio. Perithecia subindeterminata solitaria v. plura; cellulae parietales 1-pluristratosae; trichogynum ramosum plus minus in basi perithecii persistens; asci 8-spori; sporidia 1-septata cellulae ascogenae 3-plures.
- 1 Tettigomyces Gryllotalpae Thaxt., Proc. Am. Acad. 1915, p. 2.

  Hab. in superficie infer. abdominis et in processubus analibus
  Gryllotalpae africanae, Semarang Java—Perith. 135-310

  \$85-62; sporidia 45-50 \$\infty\$ 4,5; appendix 40-60 \$\infty\$ 25-40; receptaculum

  550-1400 \$\infty\$ 25-65; longit. total. ad apicem perithecii 235-1560.

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- 2. Tettigomyces plerophilus Thaxt., Proc. Amer. Acad. 1915, p. 23. Hab. in apice alae Gryllotalpae africanae, Samarang Java. — Perith.  $125-190 \approx 25-50$ ; sporidia  $45 \approx 2,5$ ; long. tot. ad apicem appendicis  $400-1000 \approx 20-30$ .
- 3. Tettigomyces indicus Thaxt., Proc. Am. Acad. 1915, p. 24. 3671

  Hab. in corpore Gryllotalpae sp., in India boreali (SCUD. DER). Perithecia. 120 × 44; recept. 100-230 × 20-28; appendix 200-400.
- 4. Tettigomyces chaetophilus Thaxt., Proc. Amer. Acad. 1915, p. 25. 3672

  Hab. in antennis abdominalibus Gryllotalpae africanae,
  Samarang Java. Perith. 100-120 \* 28-35; recept. 40-75 \* 30-40;
  appendix 50-100 μ; longit. tot. ad apicem perithecii 150-200, incluso pede 40 μ.
- Tettigomyces galeatus Thaxt., Proc. Amer. Acad. 1915, p. 26.
   Hab. in superf. inf. abdominis Gryllotalpae africanae,
   Samarang, Java. Perith. 190-225 × 55.75; recept. 100-140 × 60-80;
   long. totalis ad apicem perithecii 250-400 μ.
- 6. Tettigomyces confusus Thaxt., Proc. Amer. Acad. 1915, p. 26. 3674 Hab. in antennis abdominalibus Gryllotalpae africanae, Samarang Java: Perith. 120-200 × 40-60; appendix 40 μ, ramuli ejus 100 × 20; recept. 80-175 × 32 50; longit. total. ad apicem perithecii 230-390 μ.
- Tettigomyces brevis Thaxt., Proc. Amer. Acad. 1915, p. 27.
   Hab. in margine inf. abdominis Gryllotalpae africanae,
   Samarang Java. Sporidia 50 × 3; perith. 200-450 × 40-60; appendix 40-60, ramuli 120-150; receptac. 25-75 × 40-60; long. tot. 230-550 μ.

8. Tettigomyces acuminatus Thaxt., Proc. Amer. Acad. 1915, p. 28. 3676 Hab. in margine dext. infer. abdominis Gryllotalpae africanae, Samarang Java. — Perith. 150-200 × 40-60; sporidia (intraperith.) 40-45 × 3,5; recept. 80-40; long. tot. ad apicem perithecii 250-310 μ.

# DICHOMYCES Thaxt. Syll. XI p. 447, XIV p. 727, XVI p. 677.

1. Dichomyces argentinensis Speg., Laboulben. Argent. in Anal. Mus. 3677 Nac. Buenos Aires, XXIII p. 283 (1912) fig. 9. — Totus subhyalinus;  $250\text{-}350~\mu$  altus, cellulis extimis secundi ordinis nigris saepeque paraphysibus etiam fuscis exceptis; peritheciis ordini tertii duobus, utrinque solitariis, quarti vel supremi saepius 4-geminatis,  $140\text{-}150 \approx 20$ .

Hab. in Xantholino agili, La Plata Argentina. — Affinis D. principi et D. vulgato sed bene distinctus.

- 2. Dichomyces gracilis Thaxt., Proc. Amer. Acad. 1915, p. 29. 3678

  Hab. in processu anali Philonth. sp., Java (RONYER). Perith. 200-300 \* 22-30; recept. ad basim perith. primarii 125-160 μ; appendices 20-25 μ, latitudo major 60-110 μ.
- Dichomyces chilensis R. Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 3679
   p. 210. Pallide flava et brunneo tincta, dextero latere obscuriori; longitudo ab apice peritheci 175-220 μ; perithecium 75-100
   × 22-25; sporae circ. 35 × 3,4.

Hab. plerumque ad apicem abdominis Quedii sp., Corral Chile. America austr. — Ab aliis speciebus generis, differt forma asymmetrica, colore et perithecio apice depresse conoideo.

# **PEYRITSCHIELLA** Thaxt.—Syll. IX p. 1130, XI p. 447, XIV p. 726, XVI p. 677.

1. Peyritschiella subinaequilatera Speg., Laboulb. Argent. p. 661. Dischomyces subinaequilaterus Speg., Laboulb. Musel ital. in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 458 fig. 1. — Totus subhyalinus, corniculo excepto, parvulus, 125-150 μ altus; cellula basali subcylindrica, praebasalibus ternis, marginalibus cuneatis, aateprae basalibus quinis. marginalibus latere altero juxtapositis, cuneatis, corniculum atrum sustinentibus, opposito latere superpositis atque in appendice 6-7-mera, sensim sursum attenuata productis, supremis receptaculi, centralibus ternis perithecium fulcentibus, lateralibus nonnullis utrinque additis paraphyses filiformes basi nigro-annulatas, 20-22 × 1,5-2 sustinentibus; peritheciis solitariis, ex elliptico

cylindrace is  $60.65 \times 20.22$ , apice obtuse umbonato-ostiolatis, plane exappendicular is.

Hab. in Philontho holomallo, Arramba, Scioa, Afr. or. — P. anisopleurae Speg. affinis sed bene distincta.

2. Peyritschiella anisopieura Speg., Laboulb. argent. p. 661 fig. 188. 3681 Dichomyces anisopieurus Speg. Laboulb. ital. II, in Anal. Mus. Nac. Buenos Aires XXVII (1915) p. 48 fig. 15. — Parvulus, 125-150 μ altus; receptaculo pallido, elongato, angusto, 90-100 × 25-35, cellula basali simplici cylindracea, subbasalibus binis, altera subcylindracea altera breviore obconica, praesubbasalibus quinis, tribus longioribus duobus latero-ventralibus valde minoribus et cornu infuscatulum sustinentibus; serie autem suprema latere cornuto abortiva brevissima, latere altero longe producta, sursum arcuata, 8-9-cellulari, cellulis tribus centralibus, altera transversa interposita, perithecium fulcentibus, ceteris lateralibus paraphysibus filiformibus, erectis, 50 × 4-5, basi psallio nigro ornatis armatis: perithecio atro, subopaco, ellipsoideo-cylindraceo, 65-75 × 22-25, superne subconoideo, modice attenuato, ostiolo brevi, obtuso, levi, coronato.

Hab. in Philontho sp. ind., in Italia, Abyssinia, Argentina.

## CHITONOMYCES Peyr. — Syll. VIII p. 914, XIV p. 727, XVI p. 678 XXII p. 8.

1. Chitonomyces aculeiferus Speg., Laboulb. ital. II, in Anal. Mus. 3682 Nac. Buenos Aires, XXVII (1915) p. 44 fig. 9. — Parvus, 140-160  $\mu$  altus, totus pallidissime melleus, cellula basali turbinata, secunda subsegmentoidea; androsticho recto, abbreviato, exappendiculato; perithecio 75  $\times$  35, ventre valide convexo, dorso subrecto, ostiolo retuso, labio antico acuto brevi, postico in aculeo gracili, subrecto, 50  $\times$  7-8 producto.

Hab. in Laccophilo virescente, Lago di Tarzo, Venet., Ital. bor.

Chitonomyces Thaxteri Speg., Las Laboulb. Argent. 1917, p. 480. 3683
 Chytonomyces elongatus Thaxt., Proc. Amer. Acad. 1916, p. 13 (non Speg., II Contr. Laboulb. it. 1915).

Hab. in apice elytras dexteras Lenophilisp., Sangre Grande Trinidad. — Sporidia  $40 \times 2.5$ ; perithecia  $86-100 \times 10-12$ ; long. tot. ad apicem perithecii  $120-155 \times 12-16$ .

3. Chitonomyces elongatus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3684 Buenos Aires XXVII (1915) p. 44 fig. 10: — Elongatus, gracilis, 600-650 µ altus, totus pallidissime melleus, cellula basali cylindrica, pedicelliformi,  $200 \times 18-20$ , saepius spiraliter torta, secunda brevi subcuboidea; androsticho recto, in appendice cylindracea, recta, perithecium duplo superante,  $200 \times 18-20$  producto; perithecio subclipsoideo  $18 \times 50$ , androsticho fere toto adnato, umbone subconoideo, ostiolo minuto, labio supero subcylindraceo breviter elongato donato coronato.

Hab. in Laccophilosp., Lago di Tarzo, Venet., Ital. bor.
4. Chitonomyces ensiferus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3685
Buenos Aires XXVII (1915) p. 45 fig. 11. — Parvus, 110-115 μ altus, pallide rufescens, cellulis basali et praebasali pallidioribus; androstichi cellula secunda triangulari; perithecio subcylindraceo, 65 × 30, ventre ad medium appendice cultriformi 35 × 8 armato, ostiolo antrorsum curvulo.

Hab. in Laccophilo virescente, prope Coneglanum, Ital. bor — Affinis Ch. appendiculati Thaxt. et Ch. boreali Thaxt. sed bene distincta species.

5. Chitonomyces italicus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3686 Buenos Aires XXVII (1915) p. 46 fig. 12. — Parvus 125:150 μ alto, cellula basali hyalina, praebasali gynosticho atque androsticho primo obscure melleis serius saepe nigro-opacis, caetero piceo subpellucido; perithecio subellipsoideo 75-80 × 30-40, ventre valide convexo, dorso subrecto appendice corniformi, curvula, apice furcata, 35-40 × 6-8, nigra armato.

Hab. in Laccophilo obscuro!, prope Coneglanum, Ital. bor — Affinis Ch. melanuro, ad genus Antoicomyces characteribus quibusdam vergens.

6. Chitonomyces truncatus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3687 Buenos Aires XXVII (1915) p. 47 fig. 14. — Parvus, 175-185 μ altus, 75-80 μ crassus, totus obscure melleus; cellula basali pallidiore; androsticho recto, obtuso, abbreviato, corniculo axillari per aetatem saepe nigrescente; perithecio late ovato, 110 × 50, superne oblique truncato, minute trilobulato.

Hab. in Laccophilosp. ind., prope Romam et prope Coneglanum in Italia. — Affinis Ch. paradoxo (Peyr.) Thxt. a quo differt ob defectum cornui ostiolaris et staturam minorem.

7. Chitonomyces Bruchi Speg., Laboulb. Arg. p. 479, fig. 22. — Par. 3688 vus, pallide melleus, cellulis basali et praebasali confluentibus, latere ventrali convexo, dorsali subrecto verticali, sub ostiolo acuto introrso setula longiuscula gracili plus minusve sigmoidea dorso armatus.

Hab. in elytrarum margine Halipli Bruchi, Rosario de Santa Fe, Argent. — Magn. tot. 85-100 × 30-35; perith. 50-60 × 25.

8. Chitonomyces argentinensis Speg., Lab. Arg. p. 479 fig. 21. — Me- 3689 diocris, clavulatus, cellula basali fere tota nigra, ceterum pallide melleus, perithecio clavulato obtuso ostiolo praelongo cylindraceo arcuato v. subrecto primo hyalino dein nigro opaco abrupte terminato.

Hab. in elytrarum margine Canthydri debilis, La Plata Arg. — Alt. tot. 250; perith. 50.55 × 20.22 (sine ped.).

- 9. Chitonomyces cerviculatus Thaxt., Proc. Amer. Acad. 1916, p. 5. 3690 Hab. in elytra dext. Laccophili sp., Grenada et Trinidad.— Sporidia 36 × 2,5; perith. 45-50 × 18, rostr. 35 × 12; long. tot. ad apicem perithecii 90-100 × 23-27.
- 10. Chitonomyces introversus Thaxt., Proc. Am. Acad. 1916, p. 7. 3691 Hab. in artubus poster. Laccophili, Grand Etang Grenada. Sporidia  $36 \approx 3.6$ ; perith. pars ventr.  $54-60 \approx 27-32$ ; long. tot.  $80.95 \mu$ .
- 11. Chitonomyces Oedipus Thaxt., Proc. Amer. Acad. 1916, p. 7. 3692 Hab. in artubus poster. Laccophili sp. Sangre Grande Trinidad et Grand Etang Grenada. Sporidia 40 × 4; perithecia 72 × 30, spina ext. 21-26 μ, interna 45-55 μ; long. tot. ad apicem perithecii 100-120 × 35.
- 12. Chitonomyces Grenadae Thaxt., Proc. Amer. Acad. 1916, p. 7. 3693 Hab. in margine elytrae dext. Laccophili sp., Grand Etang Grenada. — Sporidia 36 × 2; perithecia 55-60 × 14; long. tot. ad apicem perithecii 70-75 × 20-22.
- 13. Chitonomyces uncinulatus Thaxt., Proc. Amer. Acad. 1916, p. 8. 3694
  Hab. in margine elytrae dext., L a c c o p h i l i sp., Sangre Grande
  Trinidad. Sporidia 3,2 \* 5; perith. 72 \* 18; ejus appendix 24-30
  \* 3,5; long. tot. ad apicem perith. 100-120 \* 27.
- 14. Chitonomyces manubriolatus Thaxt., Proc. Amer. Acad. 1916, p. 9. 3695 Hab. in artubus poster. Laccophilisp., Sangre Grande Trinidad, Grand Etang Grenada Sporidia 40 \* 3,5; perith. 75.85 \* 27, ejus appendix 45 \* 11; long. tot. ad apicem perithecii 125-145 \* 40-45.
- 15. Chitonomyces helicoferus Thaxt., Proc. Amer. Acad. 1916, p. 10. 3696
  Hab. in margine elytrae Laccophili sp., Sangre Grande Trinidad. Sporidia 25 × 2; perithecia 54.60 × 12,6; processus anterior 14 × 5, posterior 18-18; long. tot. ad apicem perith. 100 × 19.
- 16. Chitonomyces bicolor Thaxt., Proc. Amer. Acad. 1916, p. 11.

3697

Hab. in margine exter. elytrae sinistr. Laccophili sp., Sangre Grande Trinidad et Grand Etang Grenada. — Sporidia  $24 \times 2$ ; perith.  $60.80 \times 12.14$ ; long. tot. ad apicem perithecii  $100.125 \mu$ .

- 17. Chitonomyces seticala Thaxt., Proc. Amer. Acad. 1916, p. 11.
   3698
   Hab. in elytra sinistra Laccophili sp., Grand Etang Grenada. Sporidia 25 × 2; perith. 50 60 × 6.
- 18. Chitonomyces striatus Thaxt., Proc. Amer. Acad. 1916, p. 12. 3699 Hab. in prothorace super. Laccophilisp., Grand Etang Grenada. Sporidia 20  $\times$  15; perith.  $45-50 \times 10$ ; appendix  $9-10 \times 2-2,5$ ; long. total. ad apicem perithecii  $75-80 \times 16-17$ .
- 19. Chitonomyces longirostratus Thaxt., Proc. Amer. Acad. 1916, p. 14. 3700 Hab. in margine externo elytrae dexterae Laccophili sp., Sangre Grande Trinidad. Sporidia 30 × 2; perith. venter 65-78 × 18-20, apex 245-260 × 8-11; long. tot. ad apicem perithecii 140-156 μ.
- 20. Chitonomyces inflatus Thaxt., Proc. Amer. Acad, 1916, p. 15.
  3701
  Hab. in artubus antherioribus parvi insect. ex Dityscidis;
  Manila Ins. Philipp. (BANKS). Sporidia 40 \* 2,5; perith. 75 \* 25; longit. tot. ad apicem perithecii 100-120 \* 26-30.
- 21. Chitonomyces excavatus Thaxt., Proc. Amer. Acad. 1916, p. 15. 3702

  Hab. in margine elytrae dexter. insecti parvi ex D i t y s c i d i s,

  Manila Ins. Philipp. (Banks). Sporidia 45 × 2,5; perith. 70 × 20,

  excl. processu dentiformi (11 × 18 × 22); long. tot. ad apicem perithecii 120-150 × 30-35.

## HYDRAEOMYCES Thaxt. - Syll. XIV p. 727.

Hydraeomyces venetus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3703
Buenos Aires XXVII (1915) p. 52 fig. 17. — Parvulus 125 μ circaltus, pallide melleus, cellulis secunda et tertia receptaculi nec non parte infera androstichi vix obscurioribus; perithecio cylindraceo subellipsoideo, 70 × 35, ostiolo eximie prominulo brevi vix subbilabiato coronato.

Hab. in Halipli spec. indet. prope Coneglanum Venet., et prope Romam. — Hyd. Halipli Thaxt. affinis sed distinctus.

- PARAHYDRAEOMYCES Speg., Laboulb. ital. II, in Anal. Mus. Nac. Buenos Aires XXVII (1915) p. 70 (Etym. para proximum et Hydraeomyces). Habitu et fabrica generis Hydraeomyces Thaxt. sed receptaculo quadri-cellulari.
- Parahydraeomyces italicus Speg., loc cit., fig. 35. Totus fusco- 3704 melleus, 125-180 μ altus; receptacule vix turbinato, cellulis recep-

taculi tribus superis nec non androstichi parte dimidia infera obscurioribus; perithecio late ellipsoideo, 80 × 40, subaequilaterali. ostiolo vix prominulo.

Hab. in Haliplo striaticolli prope Romam, Ital. centr .-\* neapolitanus Speg., loc. cit. p. 70 fig 36 - A typo recedit statura paulo minore, 125-150 µ, receptaculo eximie obconoideo, cellula basali omnino hyalina, perithecio minus regulari, 60-65 > 30-25 .-Hab, in Halipli sp. indet., Neapolim, Ital. merid.

#### MONOICOMYCES Thaxt. - Syll. XI p. 675, XVII p. 915, XXII p. 9.

1. Monoicomycos affinis Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3705 Buenos Aires XXVII p. 65 (1915) fig. 31. - Parvulus, 125-150 µ altus; totus subhyalinus receptaculo 5-mero, cellula basali obconica parvula, ceteris superpositis majoribus oblique connatis, tribus inferis sterilibus et paraphysiferis, suprema e latere externo perithecigera apiceque antheridifera; antheridio panduriformi, sessili, 25 \* 12, apice longe inaequaliterque biflagellato; perithecio pedicello unicellulari plus minusve elongato fulto, elliptico elongato, 50-75 \* 22-25, modice crasse obtuseque ostiolato.

Hab. in Staphilinide minuto indeterm. Coneglanum, Ven., Ital. bor. - Affinis M. argentinensi Speg. nec non M. papuano Thaxt., M. californico Thaxt. et M. invisibili Thaxt., quae omnes potius formae ejusdem speciei videntur. .

2. Monoicomyces ternatus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3706 Buenos Aires XXVII p. 67 (1915) fig. 32. - Parvulus, 200 µ altus; luteolus receptaculo parvo, unicellulari, axi trimero, cellulis inferis nigris, suprema subhyalina, aparaphysato coronato, verticillatim ad collum genitalia terna proferente; genitalibus cellulae communis apice insidentibus; antheridiis inferis, subhorizontalibus, clavulatis, 60 × 25, sessilibus, apice 2-4-appendiculatis, appendicibus 120 \* 10-12; peritheciis superis, pedicellatis, late ovato-ellipsoideis, 100 > 50 (sine pedicello).

Hab. in Staphilinide minuto mycophilo indet. prope Coneglanum. Ven., Ital. bor. - Affinis M. britannici Thaxt. sed appendicibus antheridialibus facile dignoscendus.

3. Monoicomyces unilateralis Speg., Laboulb. ital. II, in Anal. Mus. 3707 Nac. Buenos Aires XXVII p. 68 (1915) fig. 33 - Parvulus, 150 µ altus, melleus; receptaculo minuto 1-cellulare, cellulis 2 vel 3 nigris, opacis, histmis hyalinis separatis coronato, utrinque super unguem antheridium clavatum, 45-50 v 18, exappendiculatum, sessile

succubum et perithecium incubum, ovoideo-elongatum,  $50-60 \approx 20$ , breviter pedicellatum proferente; paraphysibus paucis, e latere interno cellulae secundae appendicularis exsurgentibus, monostichis, hyalinis, parum elongatis,  $100~\mu$  circ. longis.

Hab. in Staphilinide minuto mycophilo, prope Coneglanum, Ven., Ital. bor. — Affinis M. britannici Thaxt. sed bene distinctus.

4. Monoicomyces venetus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3708
Buenos Aires XXVII (1915) p. 69 fig. 34. — Parvulus, 175-200 μ
altus, fusco-melleus; receptaculo minuto, unicellulari, 50 μ alto,
cellulis duobus subconoideis non nigrefactis coronato; ramis fertilibus binis oppositis, brevissimis; autheridio (in quoque ramo) clavato, subsessile, 40 × 20, exappendiculato; perithecio (in quoque
ramo) conoideo-lanceolato, 75 × 35, lineis obscurioribus 4 spiraliter
notato, pedicello gracili, hyalino, 25 × 10 fulto.

Hab. in Staphilinide minuto indeterm. (Atheta sp.?), Coneglanum, Ven., Ital. bor.

5. Monoicomyces zealandicus Thaxt., Proc. Amer. Ac. of Sc. 54., 1918, 3709 p. 214. — Crassa, rudis, plerumque symmetrica; cellula basilari minuta brunnea, subbasali parva hyalina aegre visibili. Peritheciis 50-60 \* 20-22, cellula pedicellari 18-25 \* 10; antheridiis 35 \* 16, appendicibus longis, 32 \* 5; totus fungus 95-108  $\mu$  long. maxima lat. 40-50  $\mu$ .

Hab. in abdomine Athetae (Acrotona) Fungi, Aukland Nova Zelandia. — M. nigrescenti quoad forma et colore proxima.

6. Monoicomyces Ocaleae Speg., Laboulb. Arg. p. 660 fig. 187. — Primo 3710 toto pallide melleo, basibus nigricantibus pedicellorum perithecialium exceptis, serius plus minusve stramineo fumoso praecipue in receptaculis secundariis, peritheciis nec non antheridiis; appendice primaria breviuscula 3-mera attenuato-conoidea obtusiuscula semper simplice.

Hab. in abdomine Ocaleae funebris, Sta Catalina B. A. et La Plata Argent. — Perith. 85-95 \* 35-40 sine ped.; anther. 80 \* 30; sporidia 32 \* 3.

7. Monoicomyces infuscatus Speg., Laboulb. Argent. in Anal. Mus. 3711 Nac. Buenos Aires XXIII (1912) p. 192, fig. 19. — Axi primario antheridiisque atris; peritheciis subhyalinis vel pallidis, longe pedicellatis, 90 \* 25; appendicibus antheridiorum quaternis fasci culatis, sat elongatis, hyalinis vel fuscis.— Totus fungus 180-200 μ altus.

Hab. in Xantholino gracili, La Plata, Argentina.

8. Monoicomyces Homalotae Thaxt. — Syll. XVI p. 675 — var. Geostibae 3712

Maire Bull. Soc. Hist. Nat. Afrique du Nord t VII, 1916, p. 8, tab. II fig. 14-22. — A typo differt peritheciis longius pedicellatis, ellipsoideo-oblongis, nec non antheridiorum appendicibus obsoletis v. coalitis.

Hab. in Geostiba Peyerimhoffii, Chiffa « Ruisseau des Singes », Algeria (DE BORDE).

- Monoicomyces Caloderae Thaxt., Proc. Amer. Acad. 1912, p. 162. 3713
   Hab. in abdomine C aloderae sp. Palermo, Temperley et Llavallol Argent. Sporidia 38 × 4; perith. inclusa cellula basil. 80. 90 × 30-35; cellula pedunc. 25 × 12; receptac. 25 × 20; append. primaria 150-175 μ; ceterae 75-100 μ; antherid. 90 × 35.
- 10. Monoicomyces Leptotrachelae Thaxt., Proc. Amer. Acad. 1915 p. 30. 3714 Hab. in abdomine Leptotrachelae javanae, Samaranga Java. Perith. 75-110 × 20-27; antheridium 40 × 12, ramuli 40 × 5; longit. totalis ad apicem perithecii 185 μ.
- 11. Monoicomyces Stenussae Thaxt., Proc. Amer. Acad. 1915, p. 30. 3 Hab. in partibus variis Stenussae ceylonicae, Samarang Java. Perithecia longiora, incl. cellulis basil. 135 × 34, pes 40 × 12; antherid. 58 × 9; long. total. ad apicem perithecii 200 μ.
- 12. Monoicomyces Amauroderae Thaxt., Proc. Amer. Acad. 1915, p. 31. 3716 Hab. in infer. abdomine et thorace Amauroderae Kraepelini, Samarang Java. Perith. cellul. pedunc. 156-275 × 20; cell. basil. 55-65 × 20-28; corpus 118 × 20-25; sporidia 30 × 4: antheridia 62-82 × 18-20; receptac. 32 μ; append. primaria 125-175 × 10-15; appendices antheridiales 40-150 × 8.
- 13. Monoicomyces denticulatus Thaxt., Proc. Amer. Acad. 1915, p. 32. 3717 Hab. ad apicem abdominis Homalotae nigrescentis, Samarang Java. Processus dentiformis  $18 \times 10$ ; perith  $125 \cdot 134 \times 40$ ; pes  $40 \cdot 45$ ; antheridia  $65 \times 24$ ; appendix primaria  $24 \times 12$ ; recept., excl. pede,  $24 \mu$ ; long. tot. ad apicem perithecii 215, incl. pede.

# EUMONOICOMYCES Thaxt. - Syll. XVI p. 675.

1. Eumonoicomyces argentinensis Speg., Laboulb. Argent. in Anal. 3718 Mus. Nac. Buenes Aires XXIII p. 188 (1912) fig. 15. — Totus subhyalinus, 250-500  $\mu$  altus; cellulis receptaculi tristiche geminatis, inferis sterilibus, mediis masculis, superis foemineis; peritheciis ovato-acutatis, longe pedicellatis, 130-170  $\approx$  30-50.

Hab. in Platysteto fallace, La Plata, Argentina.

MIMEONYCES Thaxt., Proc. Amer. Acad. 1912, p. 163. — Receptaculum ex binis cellulis superpositis compositum; cellula super. apice singulam appendicem et cellulam pedunc. singuli perithecii gerensappendix costans ex cellula basilari et ex cellulis pluribus super; positis; in cujus latere formantur antheridia composita varia; cellula superior gerit ramulos steriles. Antheridia costant e cellulis similaribus antheridialibus circ. senis; perithecia pedunculata normalia.

1. Mimeomyces decipiens Thaxt., l. c. p. 164.

3719

Hab. in artubus et abdomine Q u e d i i sore coce p h a l i n. sp., Llavallol Argent. — Perith.  $55.65 \times 24$  (pars sporogen.),  $55.65 \times 24$ , incl. basi et pede 75.95; appendix primaria 50.55, ramuli ejus longiores  $60~\mu$ ; receptac. 50.70; long. tot. ad apicem perith. 125.150; sporidia  $30 \times 2.5$ .

CANTHAROMYCES Thaxt. — Syll. IX p. 1131, XI p. 446, XIV p. 725 XVI p. 676.

1. Cantharomyces Ancyrophori Picard, Bull. Scient. France Belgique 3720 t. 50., 1916-1917, p. 444, tab. VI fig. 1. — Flavo-melleus pedunculo perithecii pallidiore; receptaculo bicellulare, cellula basali parva subquadrata, subbasali majori parum longiore quam latiore; appendicibus plerumque 3-cellularibus 2. longiore et antheridifera, apice seu cellula 3. ramulis 1-2 angustioribus multiseptatis praedita, 220-310 μ long. perithecio conoideo v. piriformi basi rotundato apicem versus sensim attenuato, 140-150 μ long. pedunculo pallide flavo, elongato quandoque plus minus abbreviato.

Hab. in Ancyrophoro flexuoso, St. Antonio (Tarnet-Garonne) Gallia (LAVAGNE). — Ch. Platystheti et occidentali praecipue affinis.

2. Cantharomyces orientalis Speg., Laboulb. ital. II, in Anal. Mus. 3721 Nac. Buenos Aires XXVII (1915) p. 43 fig. 7. — Submediocris, 180-200 μ altus, pallide mellus; receptaculo dimero, cellulis parvis; androsticho 4-mero, in cauda subhyalina, simplici, 80-100 × 10-12, inferne papillulosa producto, cellula secunda caeteris majore; perithecio elliptico-ovato, sursum sensim attenuato, 75-80 × 25-30, grosse umbonato-ostiolato, pedicello unicellulari subhyalino longiore fulto.

Hab. in Staphilinide quodam (Quaedius?) prope Coneglanum, Ven., Ital. bor.

3. Cantharomyces venetus Speg., Laboulb. ital. II in Anal. Mus. Nac. 3722

Buenos Aires XXVII (1915) p. 43 fig. 8. — Mediocris, 200-250  $\mu$  altus, melleus; receptaculo dimero, cellula parvis; androsticho 5-6-cellulare, cellula infima sessili inermi, secunda fertili saepe inermi quoque, ceteris sensim decrescentibus, ciliis rigidis erectis simpli cibus armatis; perithecio elliptico-ovato, 140-150  $\times$  50-55, grosse longiusculeque umbonato-ostiolato, pedicello unicellulari pallidiore subaequilongo fulto.

Hab. in Staphilinide quodam minuto, atro, prope Coneglanum, Ven., Ital. bor.

4. Cantharomyces Magellanicus Thaxter., Proc. Amer. Ac. of Sc. 54, 3723 1918, p. 213. — Cellula basilari subhyalina, duplo longa quam lata supra leniter constricta. Peritheciis, cellula basilari inclusa, circ. 100 × 40 pedicello 120 × 15; appendicibus circ. 70 μ, cellula pedicellari 28 × 18, segmento antheridiali 22 × 20; cellula basilari receptaculi 16 × 8, cellula subbasali 14 × 25. Totus fungus ad apicem perithecii circ. 225 μ longus.

Hab. in parvo flavido S taphylinide, Aleocharide, Punta Arenas Magellano, Chili America austr. — Forma receptaculi, longitudine pedicelli et apice perithecii prominente distincta.

5. Cantharomyces Trogophloei Speg., Lab. Arg. in An. H. N. Buenos 3724
Air. XXIX (1917) p. 470, fig. 12. — Parvus pallide fumosus, ad
septum primum geniculatus cellula subbasali latere dorsali plus
minusve crasse nigro-marginata; cellula infima androstichi minore
sterili, supera paulo majore fertili superne septo crasso nigro coronata; appendice 2-5 mera, articulis 1-3 basalibus laminaribus
septis validiusculis, nigris limitatis, suprema lageniformi majuscula;
gynosticho bicellulari, cellula infera depresso-subglobulosa parva supera turbinata majore, perithecio ovato recto v. parum inaequilaterali. ostiolo obtuso mediocri pallidiore coronato, cellulis basilaribus eximie evolutis.

Hab. in toto corpore Trogophloei tenuipuncti, in ins. Santiago La Plata, Argent. — Alt. tot. 125-150 μ, perith. 60-75 \*30-35.

6. Cantharomyces Valdivianus Thaxter., Proc. Amer. Ac. of Sc. 54., 3725 1918, p. 212. — Cellula basilari receptaculi incurvata, subhyalina v. brunneola cellula superiori pro parte brunneo-translucenti; supra longe obconoidea v. cornucopiaeoidea. Peritheciis 55-70 × 18-20, pedicello e regione basali circ. 50 × 18; sporis 39 × 3; axis appendicum 50-70, ramis terminalibus longioribus 42 × 7; segmento antheridiali 17 × 19; totus fungus ad apicem perithecii 125-175 μ long.;

receptaculo 60 × 28, basi 8 μ, cellula subbasali circ. 50 μ longa.

Hab. in Trogophloeo sp., Corral Chile, America austr. — Ab aliis in Trogophloeo viventibus differt statura majore. Cum O. Trogophloei Speg. magis convenit sed differt cellula basilari elongata opaca et caracteribus appendicum.

7. Cantharomyces Chilensis Thaxter, Proc. Amer. Ac. of Sc., 54., 1918, 3726 p. 212. — Inaequaliter obscure brunneo-fumoso tinctus, cellula basilari et pedunculo perithecii pallidiori. Peritheciis circ. 70 × 30, pedunculo et cellula basali 35-42 × 20, sporis circ. 28 × 3,5; appendicibus e apice ramulorum circ. 65 μ long., axis cellula pedicellari inclusa 35-42 × 18; receptaculo pede incluso, 32 × 20; totus fungus e apice perithecii 110-130 μ long.

Hab. in Trogophloeo sp., Baños de Apoquindo Chile, America astr. — C. Andino proximum sed differt statura, colore et praecipue caracteribus appendicum.

8. Cantharomyces Andinus Thaxter, Proc. Amer. Ac. of Sc., 54., 1918, 8727 p. 210. — Brunneo-flava, cellula basali et pedicellari subhyalina; longitudo ad apicem perithecii 90-112 μ; perithecium 45-50 × 20-22; regio cellulae basalis et pedicellaris 28 × 18; axis appendicum cellula pedicellari inclusa, 35-40 × 15; appendices longiores 30 × 6, receptaculum cum pede 30-34 × 18.

Hab. in Trogophloeo sp., Baños de Apoquindo prope Santjago Chile America Austr.—Proxima C. Trogophloei Speg. et C. pusilla a quibus et aliis in Trogophloeo viventibus differt cellulis axialibus appendicum supra segmentum antheridialem depressis.

9. Cantharomyces abbreviatus R. Maire, Bull. Soc. Hist. Nat. Afrique 3728 du Nord, t. 11., 1920, Extr. p. 11, tab. I fig. 5-7. — Rufo-brunneus, pellucidus, parvus; receptaculi, cellula basali obconica, cellula subbasali paulo majore, subquadrata, appendicem masculam et perithecii pedicellum gerenti. Appendicis masculae cellula secunda antheridifera, cellula prima subapplanata, cellulis distalibus 1-3, brevibus nec discoideis, cellula apicali subhyalina subglobosa v. elongata, rarius in filamentum brevem producta. Antheridio composito multicellulari externo. Perithecio lageniformi, symmetrico, in rostrum obtusum attenuato; estiolo subhyalino; perithecii pedicello brevi; cellulis basalibus superioribus parvis subtriangularibus, inferiore subcylindrica. Totus fung. 90-115 µ alt.

Hab. in Trogophloeo corticino Grav., prope Hipponem Reg. Numidiae, Africa bor.

10. Cantharomyces numidicus R. Maire, Bull. Soc. Hist. Nat. Afrique 3729

du Nord., t. 11., 1920, Extr. p. 12, fig. 3. — Receptaculo bicellulari, cellula basali parvula, praeter unguem subhyalina; septo primo valde obliquo; cellula subbasali obconica, basali subtriplo majore, basi extus hyalino-gibbosa fere tota nigro-suffusa, appendicem masculam apicalem et gynostichum sublateralem gerenti. Appendice mascula rufo-brunnea pellucida, dolioliformi, e pedicello unicellulari, antheridio et ramis apicalibus sterilibus mox collapsis constituta; pedicello brevi, latissimo, crassissime tunicato; antheridio subgloboso, ad septum apicalem nigro-suffuso e cellula interiore et cellula superiore-interiore magnis indivisis, et cellulis exterioribus permultis parvulis constituto; perithecii pedicello breviusculo, subcylindrico, subincurvato cum perithecii cellula basali inferiore longiuscula, subcylindrica, subhyalina, concrescenti; perithecio juniori dilute melleo, lageniformi, apice in rostrum cylindricum subretusum abrupte contracto. — Totus fungus 153 µ alt.

Hab. in Trogophloeo Mannerheimi Kolen, in Numidia, Africa bor.

11. Cantharomyces italicus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3730 Ruenos Aires XXVII (1915) p. 42 fig. 6. — Parvulus, 125 μ altus, totus pallide melleus; receptaculo 2-cellulari, cellula praebasali sat turgida, e latere gynostichum fulcente, superne androsticho 1 mero, cellula antheridifera 25 × 12 in flagello 3-4 articulato producta co. ronato; stipite peritheciali saepius monomero omnino libero, perithecio subellipsoideo breviter crasse obtuseque attenuato-ostiolato, 75 × 23-25.

Hab. in Dryoptide (Parno) algirico, prope Coneglanum, Ital. bor. — Affinis C. Bruchii Speg. et C. Bordei Pic.

12. Cantharomyces Thaxteri Maire, Bull. Soc. Hist. Nat. Afrique du 3731 Nord, t. VII, 1916, p. 100, cum icon. — Pede atro excepto flavomelleus; receptaculo bicellulari, brevi; appendice antheridifera unica, e cellulis 2-3 subisodiametricis et ramis fasciculatis constante. Antheridio in appendicis cellula secunda evoluto, composito, introrso; appendicis ramis cellula secunda evoluto, composito, introrso; appendicis ramis perithecium superantibus, incrustatis, mox ruptis et collabescentibus. Peritheciis rarius 2. Perithecio saepius unico, subconico, subsymmetrico, pede unicellulari plus minusve elongato et cellulis basalibus 3 minoribus suffulto. Ascosporis ad ½ inferiorem septatis, fusiformibus, utrinque acutis, muco obvolutis, 25 × 2,7. — Alt. a pede usque ad ostiolum: 110-135 μ; perithecium: 60-62 × 23-26; appendicis long. usque ad 150 μ

Hab. in membris Trogophloei dilatati Er. in Galloprovincia (P. DE PEYERIMHOFF).

13. Cantharomyces Bordei Picard, Bull. Soc. Mycol. 1913 p. 516 fig. 5.— 3732 Receptaculo ex duobus cellulis efformato subbasali majori; peritheciis subconoideo-piriformibus, 100 × 48-50, pedicello unicellulari brevissimo praedito; appendice e cellula subbasali orta, supra antheridium ferenti antheridio apice duobus cellulis praedito, cellula inf. brevi lata superiori elongata cylindracea et cum praecedenti appendicem 45 μ longam efformantibus; totus fungus e basi usque ad apicem perithecii 160 μ long usque ad apicem appendicis 160 μ.— Colore fiavo-pallido, cellula basali appendicis obscuriore, cellulis terminalibus appendicis hyalinis

Hab. in Limnicho sericeo, Biskra Algeria (M. DE BORDE).

14. Cantharomyces Bruchi Speg., Laboulb. Argent. in Anal. Mus. Nac. 3735

Buenos Aires XXIII p. 179 (1912) c. ic. — Parvulus, totus pallide melleus; receptaculo bicellulari, cellula supera e latere perithecium stipitatum fulcenti, superne in flagello 10-12-articulato producta, cellula secunda (an etiam tertia basali?) flagelli antheridifera. Alt. 200-240 μ, perith. 100-110 × 35-40, flagell. 300 μ longo.

Hab. in Parno corpulento, prov. Buenos Aires, Argentina.

15. Cantharomyces permasculus Thaxt., Proc. Amer. Acad. 1912, p. 165. 373. Hab. in Parni specie majuscula, imprimis in elytris, Palermo Argent. et Plenomi pubescentis, La Plata (SPEG.) — Perith. 135-160 × 40-50; cellula pedunc. 45-60 μ; sporidia 70-75 × 4; receptac. 100-155 × 40; appendix primaria 200-255, rami longioris 250; long. total. ad apicem perithecii 275-375 μ. — Teste cl. Spegazz. Lab. Argent. n. 11, haec species non differt a C. Bruchi Speg. 16 Cantharomyces platensis Thaxt. Proc. Amer. Acad. 1912, p. 166, 3735.

16. Cantharomyces platensis Thaxt., Proc. Amer. Acad. 1912, p. 166, 3735 Speg., Lab. Arg. fig. 12.

Hab. in elytris minutae speciei Parni (1), Palermo Argent. et Pelonomi simplicis, Santiago La Plata (SPEG.).—Perith. 125-150 × 32-44, cellula pedunc. 135-235 × 25-35; sporidia 60 × 4; receptacul. 60-75 × 35-40; appendix primaria 110-135 μ, rami longioris 200 μ; long. total. ad apicem perith. circ. 400 μ.

### HERPOMYCES Thaxt. - Syll. XVII p. 915, XXII p. 10.

1. Herpomyces macropus Speg., Laboulb. Arg. p. 548 fig. 91. — H. pa- 3730 ranensi Thaxt. proximus, sed masculus receptaculo androstichoque majoribus et fabrica omnino aliena recedens; foemineus autem pe-

rithecio nonnihil majore in stipite graciliore conspicue longiore abrupte contracto, thallo augustiore atque minus expanso distinctus.

Hab. in antennis Blaberae? sp. permagnae, Oran Salta Ar. gent. - Antherid. 22-24 \* 3; cell. bas. 30 \* 7-8; androst. 100-110 \* 5-6 (masc.); perith. 55-60 \* 25-28, ped. perith. 60-80 \* 10-15 (fem.)

2. Herpomyces Stilopygae Speg., Laboulb. Arg. p. 551, fig. 95. - Pel- 3737 therpomyces; masculus semper exappendiculatus; foemineus scutello irregulariter cordato ovato sursum obtusissime rotundato deorsum sulcis nonnulis nigris praeditus, perithecio lanceolato magno. cellulis parietalibus 1-seriatis angustissime linearibus donatus.

Hab. frequens in antennis Periplanetae orientalis. Montevideo, Buenos Aires et La Plata - Perith. tot. 175-215 \* 40-45.

- 3. Hernomyces Panesthiae Thaxt., Proc. Amer. Acad. 1915, p. 32. Hab. in antennis Panesthiae lobipennis, pr. Peradeniya Ceylon. - Ind. masc.: recept. 80; ejus cell. basilaris 40 > 20; antheridia 60 µ; long. tot. ad apicem antherid. 150 µ. Ind. fem.: Perith. 92 μ, ad apicem spinae infer. 102 μ, latit. maxima 30 μ; recept. primar. 26 \* 7, recept. secund. 60 \* 28; long. tot. ad apicem spinae 180.
- 4. Herpomyces chilensis Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 3739 p. 216. — or copiose 45 ramosus, ramulis antheridia angusta plerumque curvata gerentibus, 18 × 2; totus 65 μ circ., long. — Q caracteribus praecipuis ut in H. Nyctoborae cuis varietas tantum apparet. - Totus fungus 175-220 µ long. Perithecio e superiori parte cellulae basali usque ad apicem spinae terminalis 140-165 × 18; spinis subterminalibus 30-32 μ, terminalibus 10 μ; regione basali 15-17 \* 22-24; receptaculo secundario 18-20 \* 28-32.

Hab. in antennis insecti cujusdam ( wingless roach »), prope Baños de Apoquindo, Chile, America austr.

# AMORPHOMYCES Thaxt. - Syll. XI p. 448, XIV p. 728.

1. Amorphomyces italicus Speg., Laboulb. ital. II in Anal. Mus. Nac. 3740 Buenos Aires XXVII (1915) p. 38 fig. 1. — Foemina adhuc tantum nota, parvula, 100 µ circ. alta, hyalina, primo erecta dein arcuato-incurvata; cellula basali superne a cellulis perithecigeris constrictione et septo nigro valido obliquo separata; perithecio subclavulato, 24-26 µ lato, obtuse umbonato-ostiolato, umbone leniter fusco-flavescente.

Hab. in Atheta quadam indeterm. prope Coneglanum, Ital. bor. 2. Amorphomyces Trogophloei Speg., Lab. Arg. in An. Mus. N. Buen. 3741

Air. XXIX (1917) p. 465, fig. 7. — Masculus cylindraceus, rectus, cellula basali hyalina, praebasali duplo longiore rufescente, antheridio vix inclinato subconoideo donatus. Foemina elongata arcuata v. sigmoidea mediocris, tota hyalina, cellula basali obpiriformi ungue magno nigro imposita, superne septo discoidali rufescențe non v. vix obliquo limitata; perithecio erecto plus minusve arcuato naviculari, obtuse umbonato ostiolato, cellulis basilaribus minimis parum perspicuis.

Hab. in toto corpore Trogophloei atramentarii, ins. Santiago pr. La Plata Argentina. — Alt. tot.  $40.42 \mu$  (masc.) 100-125 (fem.); perith.  $90-100 \approx 30-35$ .

Amorphomyces Ophioglossae Thaxt., Proc. Am. Acad. 1912. p. 167, 8742
 Speg., Lab. Arg. fig. 5.

Hab. in capite et abdomine O p h i g l o s s a e sp., Llavallol, Tucuman Argent. (SPEGAZZINI). — Ind. masc.: tot. longit. cum pede 55-65  $\times$  5; cellula antheridialis  $28.32 \times 6-7$ . Ind. femin.: cell. basil.  $8 \times 8$ ; longit. total. cum pede  $(7-11 \mu)$ ,  $100-120 \times 30-35$ .

4. Amorphomyces rubescens Thaxt., Proc. Amer. Acad. 1912, p. 167, 3743 Speg., Lab. Arg. fig. 6.

Hab. in abdomine Diestotae, Tempesley, Llavallol, Homalotoae in Argentina. — Ind. masc.: long. tot. incluso pede 65  $\mu$ ; cellulae basil. binae 16-18  $\times$  6; antherid. 35-37  $\times$  9; rostr. 19-20  $\mu$ ; indiv. fem. cell. basil.  $7 \times 9$ ; longit. tot. cum pede 140-165  $\times$  25.

TETRANDROMYCES Thaxt., Proc. Amer. Acad. 1912, p. 168. — Ind. masc. ex quatuor cellulis superpositis constantes; cellula superior coronam antheridiorum gerens. Ind. feminea ut in *Dioicomycete*.

1. Tetrandromyces Brachidae Thaxt., Proc. Amer. Acad. 1912, p. 168. 3744 Hab. in superf. sup. abdominis Brachidae Reyi, Llavallol Argent. — Ind. masc: antheridia  $23 \times 8$ , eorum unio  $16 \mu$  lata; long. tot. cum pede  $60 \mu$ : indiv. fem.: sporidia intra perith., masc.  $28-30 \times 45$ , feminea  $40 \mu$ ; perith.  $200-235 \times 50-65$ , processus subtermin.  $8 \mu$  long.; cellula pedunc.  $60 \times 20$ ; cellula appendicis sterilis  $20 \times 12$ ; long. total. ad apicem perith.  $250-280 \mu$ .

# DIOICOMYCES Thaxt. Syll. XVI p. 679.

Dicicomyces Anthici Thaxt. — Syll. XVI p. 679 — var. fuscescens 3745
 R. Maire, Bull. Soc. Hist. Nat. Afrique du Nord, t. 11, 1920, Extr.
 p. 14, tab. I fig. 9-10. — A typo differt, colore intensius melleo, cellula subbasali valde applanata, cellula terminali sterili tota fu-

liginosa, minus elongata. Totus fungus 240-250 µ alt.

Hab. in Anthico Rodriguesi Latr., prope Hipponem Reg. Numidiae, Africa bor.

2. Dioleomyces italicus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3746 Buenos Aires XXVII (1915) p. 51 fig. 16. — Masculi lineares pusilli, omnino hyalini, medio 1-septati, foeminei mellei, submajusculi, 300-325 μ alti, eximie ubique pellucidi, receptaculo clavulato-obovato, 75 × 25, bicellulari, cellulis subaequilongis, mucrone conico, recto, brevi, obtuso coronato; pedicello obconoideo, abbreviato, 65-75 × 25, pallido; perithecio majusculo, 200 × 50, leniter arcuato, subnaviculari, cingulis prominulis tribus subobsoletis ornato.

Hab. in Anthico? his pido, Coneglanum, Venet., Ital. bor.—Affinis D. Anthici Thaxt, sed bene distinctum.

3. Dioicomyces falcatus Speg., Lab. Arg. p. 522, fig. 65. — Masculus 3747 brevis, receptaculo toto infuscato, antheridio hyalino aequilongo armato. Foemineus mediocris eximie falciformis, perithecio obscure fumoso ex ovato arcuato-naviculari sursum in ostiolo cylindrico crasso obtuso producto, deorsum cellulis basilaribus optime evolutis, dorsali majore turgida, sporis fuligineis nigro-unguiculatis, pedicello hyalino v. subhyalino breviusculo leniter clavulato, receptaculo normali recto subfuligineo appendice recta acutiuscula.

 $\it Hab.$  in thorace et elytris Anthici postmaculati, Sta Catalina B. A., Argentina — Recept. cum anther. 45-48  $\mu$  (masc.); perith. 115-120  $\approx$  50-55 (sine ped.); alt. tot. 135-160  $\mu$ .

4. Dioicomyces Formicillae Thaxt. (cnfr. n. 17).— \* D. anthicicola Speg., 3748 Lab. Arg. p. 523, fig. 66 a.—Forma praecedenti praecipue accedens, a qua tamen parte basilari perithecii infuscata, sporis pallidioribus receptaculoque nec non ejusdem appendice vix fumosis differre videtur.

Hab. in elytris et artib. Anthici floralis, La Plata Argent. — Alt. tot. 185-200  $\mu$ , perith. 85-100  $\approx$  55 (sine ped.). — D. brachygnatus Speg., l. c. p. 524, fig. 66 b. — A typo recedit magnitudine semper paulo minore, peritheciis pro ratione brevioribus crassioribusque, ostiolo, peritheciis, nec non sporis pallidioribus.

Hab. in thorace et elytris Formicillae Bruchi, La Plata Arg. — Alt. tot. 200-275  $\mu$ ; perith. 100-125  $\approx$  55-60 (sine ped.).

5. Dioicomyces glossophorus Speg., Lab. Arg. p. 525, fig. 67. — Ma- 3749 sculus parvulus linearis, antheridio ovato minuto donatus. Foemineus mediocris pallidus rectus perithecio ellipsoideo v. subbiconico utrimque sensim attenuato, dorso et ventre plus minusve convexo, sursum in ostiolo partem ventralem versus incurvato obtuso pro-

ducto, labio ostiolari infero appendice linguaeformi angusta sigmoidea erecta v. pendula ornato, cellulis basilaribus non perspicuis, in pedicello brevi obconico sensim angustato; sporis hyalinis; receptaculo pallido, cellulis subbasali et infera appendicis fumosis.

Hab. in tiblis et abdomine Anthici post maculati, Santa Catalina B. A., Argent. — Recept. cum anth. 40  $\mu$  (masc.); perith. 100-110  $\approx$  40-42 (sine ped.); alt. tot. 150-165  $\mu$ .

6. Dioicomyces refractus Speg., Laboulb. Arg. p. 528, fig. 71. — Ma- 3750 sculus adhuc ignotus. Foemineus majusculus flavescenti fumosus, pedicello ovato-lanceolato ob cellulam basilarem ventralem hypertrophicam abrupte refracto, ostiolo obtusissimo subtruncato, pedicello obconico valde breviore, receptaculo normali appendice longiuscula subincurva armato; sporis hyalinis ungue nigro donatis.

Hab. in thorace et elytris Anthici postsignati in ins. Santiago, La Plata. — Alt. tot.  $225-250 \,\mu$ ; perith.  $120-130 \approx 55-60$  (sine ped.).

7. Dioicomyces infuscatus Speg., Lab. Arg. p. 527, fig. 68. — Mascu- 3751 lus ignotus. Foemineus totus castaneus, mediocris, perithecio late ovato leniter inaequilaterali et inclinato apice abrupte in ostiolo brevi obtuso producto, cellulis basilaribus parum manifestis, pedicello obconico brevi crasso fusco, receptaculo crasse infuscato appendice longiuscula armato.

Hab. in elytris Anthici pallidicoloris, La Plata — Alt. tot. 175-190  $\mu$ ; perith. 105-115  $\times$  58-60 (sine ped.).

8 Dioicomyces pallidus Speg., Lab. Arg. p. 527, fig. 70.— Masculus 3752 linearis rectus subhyalinus, margine nigrifactus. Foemineus mediocris rectus v. plus minusve sigmoideus, receptaculo excepto infuscato, totus pallide melleus; perithetia cymbiformia ventre plana v. vix concava dorso valide convexa, sursum in ostiolo subcylindrico sublongiusculo producta, cellula basilari ventrali leniter prominula et perspicua, pedicello recto v. arcuato breviore hyalino suffulta; receptaculum atrum, appendice ovata crassa obtusa concolore ornatum.

Hab. ad genitalia Anthici postmaculati, Santa Catalina B. A., Argent. — Recept. cum anther. 45 μ (masc.); alt. tot. 175-200 μ; perith. 90-100 × 35-45 (sine ped.) (fem.).

9. Dioicomyces rostellatus Speg., Lab. Arg. p. 529, fig. 72. — Mascu- 3753 lus non inventus. Foemineus obscure fumoso-castaneus, perithecio erecto subnaviculari-cylindraceo dorso recto ventre convexiore saepius sursum leniter incrassato abrupte in ostiolo crasso brevi co-

nico obtuso angustato, sub ostiolo cornu crassiusculo modice patente armato, cellulis basilaribus parum perspicuis; pedicello obconico crasso obtuso pallidiore basi geniculatim receptaculo adfixo; receptaculo intense colorato, appendice recta acuta sublongiuscula coronato.

Hab. in apice elytrarum Anthici floralis, La Plata. — Alt. tot. 150-160  $\mu$ ; perith. 90-100  $\star$  45 (sine ped.).

10. Dioicomyces subtorulosus Speg., Lab. Arg. p. 430, fig. 73. — Ma- 3754 sculi desiderati; foeminei mediocres pallidissimi rectiusculi v. lenissime subsigmoidei, peritheciis erectis subnavicularibus margine ventrali recto dorsali convexo ibique in tertio infimo dentibus 2 v. 3 serratis sursum abrupte conoideo-ostiolatis, apice obtusissime rotundatis, pedicellis obclavulatis hyalinis, parum brevioribus, receptaculo subhyalino appendice brevi obtusa fumosa, ungue crasso atro.

Hab. in abdomine Anthici decerpti in ins. Santiago, La Plata — Perith. sine ped. 110-120  $\times$  35-40; alt. tot. 225-250 μ (femin.).

11. Dioicomyces torulosus Speg., Lab. Argent. p. 531, fig. 74. — Ma. 3755 sculus parvulus fere achrous linearis, antheridio majusculo lanceolato donatus. Foemineus majusculus totus pallidissime melleus v. hyalinus; perithecio maximo subfusoideo leniter incurvato, parte media supera utrimque 3-gibbosa, ceterum fere laevi, cellulis basilaribus parvis triangularibus; pedicello e cylindraceo subfusoideo parum breviore; receptaculo pro ratione parvo appendice conica recta brevi ornato.

Hab. in apice elytrarum et abdominis Anthici decerpti in insula Santiago, La Plata. — Masc.: recept. cum anther. 55  $\mu$ ; fem.: alt. tot. 300-350  $\mu$ ; perith. sine ped. 175-200  $\times$  45-50.

12. Dicicomyces uncinatus Speg., Lab. Arg. p. 582, fig. 76. — Mascu- 8756 lus parvus fere linearis infuscatus, antheridium concideum hyalinum fulcens. Foemineus majusculus, perithecio ovato-elongato valide arcuato subfuligineo, in ostiolo sensim attenuato apice obtusiusculo producto, cellulis basilaribus perspicuis sed non v. vix prominulis; pedicello subfusoideo hyalino sursum valido attenuato; receptaculo plus minusve nigrefacto, appendice conica acutiuscula v. leniter arcuata.

Hab. frequens in thorace et elytris Anthici parvi, Sta Catalina B. A., Arg. — Recept. cum anther. 50  $\mu$  (masc.); perith. sine ped. 85-100  $\approx$  38-45, alt. tot. 250  $\mu$  (fem.).

13. Dicicomyces endogaeus Picard, Bull. Soc. Mycol. Fr., 1913, p. 523, 3757 fig. 6.— $\mathcal{O}$ . Longe cylindraceo-clavulatum e 4 cellulis constituto, basi pede sen cellula nigra adfixo; cellulis 3 inf. receptaculum efformantibus,  $4^a$  v. superiori antheridio sistente et tubulo acuto antheridio longitudine subaequante terminato; totus 95  $\mu$  long., antheridium 65  $\mu$  long. basi 4  $\mu$  lato, supra 8-9  $\mu$ — $\mathbb{Q}$ . Receptaculum e quatuor cellulis constitutum, subbasali lateraliter perithecium gignenti; perithecio infra e cellula pedicellari elongata donato, elongato, basi leniter inflato apice sensim attenuato obtuso, 80  $\mu$  longo 33  $\mu$  lato, pedicello 30  $\times$  15. — Totus, long. maxima, 175  $\mu$ ; hyalinus v. pallide succineus perithecio et cellula tertia receptaculi parum obscurioribus.

Hab. ad helitras Anilli caeci, Foix Ariège Gallia.

14. Dioicomyces umbonatus Thaxt., Proc. Am. Acad. 1912, p. 170, 3758 Speg., Lab. Arg. fig. 75.

Hab. in basi elytrae prope marginem inter. Anthici parvi, Temperley et Sta Catalina, Argent. — Indiv. masc., cellula basil. cum pede 20  $\mu$ ; tot. longit. ad basim rostro 35  $\times$  5; rostrum 12  $\mu$ . Ind. fem. Perith. ad apicem 70-78  $\times$  40-43 (incl. umbone); cellula pedunc. 40-42  $\times$  12-15; receptac. ad apicem appendicis, incl. pede 42  $\mu$ ; tot. long. 135-145  $\mu$ .

15. Dioicomyces melleolaris Thaxt., Proc. Amer. Acad. 1912, p. 170, 3759 Speg., Lab. Arg. fig. 69.

Hab. in elytra, imprimis dextera Anthici parvi, Palermo Llavallol et Sta Catalina Argentina. — Ind. masc. long. tot.  $45 \approx 7.5$ ; indiv. femin. sporidia  $28-30 \approx 3.5$ ; perith.  $99-100 \approx 26-32$ ; cellula pedunc.  $65-90 \approx 16$ ; cellula appendicis 15-16; recept. incluso pede 28.

16. Dioicomyces Formicillae Thaxt., Proc. Am. Acad. 1912, p. 169, 3760 Speg., Lab. Arg. fig. 66. — Cnfr. u. 5.

Hab. in elytris Formicillae strangulatae et leporinae, Palermo, Llavallol, Temperley La Plata, Argent. — Indiv. masc. long total cum pede et rostro 60-70; cellula basilaris 20  $\times$  8; indiv. femin., sporidia fem.  $40-42 \times 8$ , masc.  $35 \times 5$ ; perith.  $145-165 \times 45-50$ , cellula pedunc.  $140-180 \times 25$ ; recept. cum pede et cellula appendicis 40-65.

Dioicomyces angularis Thaxt., Proc. Am. Acad. 1912, p. 171, Speg., 3761
 Lab. Argent. fig. 64.

Hab. in apice elytrae et abdomin. Anthici parvi, Temperley et Llavallol et Sta Catalina, Argent. — Indiv. mascul.: long.

tot. excl. rostro 30  $\times$  6; rostr. 8  $\mu$ ; cellula basil. excluso pede 8  $\mu$ —Indiv. fem.: Perith. 80.94  $\times$  35.42, cellula pedunc. 98.120  $\times$  15; recept. ad apicem appendicis 38; long. total. 185  $\mu$ .

- BORDEA Maire, Bull. Soc. Hist. Nat. Afrique du Nord t. VII, 1916, p. 13 (Etym. a Cl de Borde entomologo gallico sollertissimo).— Antheridium unicellulare, in appendice masculo simplici acrogenum; appendices steriles nullae; appendix mascula e cellula terminali receptaculi orta, basi nigro-annulata; perithecium asymmetricum, e cellula subbasali ortum.
- 1. Bordea coronata Maire, l. c., tab. I fig. 2-5.— Minor (60-75 μ long. 3762 tot.) dilutissime brunneola; receptaculum (30-38 μ long.) 3-cellulare; cellulae basalis pede atrato; appendix masculus (28-30 × 4-5) conicus v. subfusiformis, transverse 2-3 septatus, basi nigro-annulatus, apice antheridium conicum rectum v. curvulum, lateraliter cornutum gerens. Perithecium (62-75 × 26-28) pedunculo unicellulari brevi a receptaculo non v. vix discreto suffultum, extus ventricosum; intus rectum, in collum breve constrictum; ostiolum apicale, basi apophysibus 8 coronatus; ascosporae fusiformes, utrinque acutae, inaequaliter 1-septatae, hyalinae, laeves, strato mucoso obvolntae, 26-30 × 2.

Hab. in membris et in abdomine Brachyglutae Aubei Tourn., pr. Biskra Algeria, Africa bor.

2. Bordea platensis Speg., Lab. Arg., An. Mus. Buenos Aires, 1917, 3763 XXIX p. 463, fig. 3 (ut Sectio gen. Acompsomyces Thaxt., Syll. XVI p. 692, XVII p. 917, XXII p. 11.—Pusillus, ramulo antheridifero 3-cellulari, cellula basali ceteris conspicue crassiore septo nigro incrassato ibique valido constricta; cellulis duabus superis gracilibus subhyalinis horizontaliter septatis, antheridio apicali mediocre elongato-conico subinermi, perithecio cum pedicello abrupte geni culato-inflexo subolivaceo appendiculato, ostiolo subcylindrico elongato pallidiore coronato.

Hab. in elytris Decarthri simplicis, insula Santiago Argentinae. — Alt. tot. 100-110 μ; perith. 60-65 × 20-25.

3. Bordea decarthricola Speg., Lab. Argent., An. Mus. Buen. A., 1917, 3764 XXIX p. 462 fig. 2. — Pusillus, ramulo antheridifero 3-cellulari crassiusculo fumoso, septo praeapicali oblique nigro, antheridio apicali oblique eximie 1-spinoso, perithecio recto subhyalino subexappendiculato, ostiolo subabbreviato.

Hab. in toto corpore Decarthri rufipennis, insul. San-

tiago La Plata, Argentinae. - Alt. tot. 100-110; perith. 75 - 30.

- synandromyces Thaxt., Proc. Am. Acad. 1912, p. 174. Receptaculum e cellulis binis constans, una cum cellula basilari appendicis structuram compactam constituens; perithecia majuscula, cellulam ascogenam unicam et quatuor cellulas parietales in quaque serie gerens, cellula basilari brevi isthmum angustum inter cellulam basilarem et receptaculum formans; antheridia in fasciculum dense conferta, rostris divergentibus; trichogynum bicellulare. Genus Acompsomyceti proximum.
- Synandromyces Telephani Thaxt., Proc. Am. Acad. 1912, p. 175. 8765
   Hab. in elytris, prothorace, etc. Telephani sp., Temperley et Llavallol, Argent. Sporidia 40 × 6; perith. inclusa basi 45-60 × 35; appendix, inclus. antheridiis, 45-50 × 20.
- 2. Synandromyces geniculatus Thaxt., Proc. Amer. Acad. 1912, p. 176. 3766

  Hab. superf. super. abdominis Telephanisp., Temperley et Llavallol, Argent. Sporidia 30 × 5; perith. 135-155 × 45-60; processus rostratus 45-50 μ; appendix, incluso antheridio, 30 × 20 (pars libera).
- 3. Synandromyces javanus Thaxt., Proc. Amer. Acad. 1915, p. 34. 3767 Hab. in artubus insect. ad sect. Telmatophili pertinentis, Samarang Java. Perith. 120-135 × 40-50; recept. incluso pede 40 × 32, pars libera appendicis antheridialis 35-40 × 22-25, long. tot. ad apicem perithecii 155-175.
- ILYOMYCES Picard, Bull. Scient. France Belgique t. 50., 1916-1917, p. 445. Gen. Acallomyces Th. proximum, a quo differt praecipue appendicibus ramosis nec simplicibus, cellulis receptaculi obliquis basali semper bene evoluto.
- 1. Ilyomyces Mairei Picard, l. c. p. 446, tab. VI fig. 3. Hyalina. Receptaculo bicellulari, 40  $\mu$  long., cellulis septo obliquo divisis, et tunc subparallele dispositis, basali infra fuscata; subbasali cellulam alteram pedunculum perithecii ferente alteram appendicem; perithecio subellipsoideo-elongato, parum incurvato 110-115  $\approx$  45, apice poro 4-labiato praedito, labiis inaequalibus, duobus apophysatis; appendicibus pedunculatis apice cellulis duobus divergentibus singulis antheridiis duobus phialaeformibus terminatis, 75  $\mu$  long. Totus fungus 150-155  $\mu$  long.

Hab. in Steno elegante, Bonde (Vaucluse), Gallia.

2. Ilyomyces Lavagnei (Picard) Picard, Bull. Scient. France Belgique 3769

t. 50., 1916-1917, p. 446, Acallomyces Lavagnei Picard F., Bull. Soc. Entom. de Fr. 1913, n. 18, p. 462, 3 fig. — Peritheciis flavidis, oblougis utrinque parum attenuatis, 170-250  $\mu$  long.; apice labiis quatuor mamillaribus clausis; sporidiis hyalinis oblongo-clavulatis bilocularibus, 50  $\mu$  long.; appendice basilari perithecii 80-95  $\mu$  long. ex tribus cellulis superpositis constituto, cellula terminali duobus raro tribus antheridiis elongatis obclavatis 20  $\mu$  long. praedita; cellulis duobus receptaculi angustis oblique subparallelis.

Hab. ad thoracem, élythras raro ad abdominem Stenus a ceris in silva St. Guilhem-le-Desert (Hérault), Gallia (Leg. LAVAGNE).

**STIGMATOMYCES** H. Karst. — Syll. VIII p. 912, XIV p. 729, XVI p. 680, XXII p. 11.

- 1. Stigmatomyces asymmetricus Thaxter, Proc. Amer. Ac. of Sc. 53., 3770 1918, p. 718. Receptaculo crasso et crasse tunicato pedem versus angustato, cellula basilari subbasali longiore, incurvata pallidiori v. hyalina, subbasali demum flavo-rubra; cellula pedicellari appendicum rubro-succinea, duplo longiore quam latiore; cellula pedicellari perithecii cum cellulis appendicum concolori; ventre perithecii granuloso-rugoso, 150 × 180 × 40-45, sporis circ. 25 × 2,5, receptaculo 85-100 × 25-28, appendicibus 46 × 10, quorum cellula pedicellari 25 × 10, totus fungus 250-280 μ longo.
  - Hab. in abdomine Agromyzidaesp., Kamerun Africa occ. trop. S. Scaptomyzae proxima.
- 2. Stigmatomyces divergens Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3771 p. 719. Subsigmoideus, crassiusculus obscure rubro succineobrunneo, receptaculo hyalino perithecio breviore; cellula basilari appendicum brevi, valida, extus fortiter convexa, rubro-brunneo tincta, appendicibus caeterum brevibus, crassis, basi angustatoconstrictis obscurioribus; cellula pedicellari perithecii magis lata quam longa, secundaria angustiori; perithecio 155-170 × 42-50, sporis circ. 25 × 3, appendicibus 42-48 × 4, receptaculo 80-100 × 28, totus fungus 250-280 μ long.

Hab. ad capitem et alam Agromyzidae sp., Kamerun Africa occ. trop. — Proxima S. Drapetis.

3. Stigmatomyces macrandrus Thaxter, Proc. Amer. Ac. of Sc. 53., 8772 1918, p. 720. — Elongatus, gracilis, stramineus supra receptaculum hyalinum infra ventre brunneo tineto; receptaculo plerumque curvo diametro aequali, cellula basali quandoque parum latiore; appendicibus vix leniter divergentibus, longis, axe e cellulis 7-8

sensim minoribus efformato; cellula primaria et secundaria perithecii subaequalibus; ventre recto, apice perithecii prominentiincurvato infra leniter expanso, supra prominenter labiato; perithecio 190  $\mu$ , ventre 70-75  $\times$  30-35, sporis (in perithecia) circ. 30-35  $\times$  35, appendicibus 100-110  $\times$  16, receptaculo 210-245  $\times$  21, totus fungus 385-450  $\mu$  long.

Hab. in Anthomyidae sp., (Dipt.), Kamerun Africae occ. trop. — Stig. dubio proxima species.

4. Stigmatomyces tortilis Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3773 p. 721. — Breviuscula et crassiuscula, curvula, sordide flavescens supra receptaculum hyalinum brunnea; cellula pedicellari perithecii magis lata quam longa, ventre lato et infra leniter inflato, cellula distali prominula collo incurvato crasso longitudine subaequali, cellulis extus guaina spiraliter contorta usque ad apicem abrupte angustato praeditis; perithecio 140 × 32 35, sporis circ. 25 × 3,5, appendicibus 60 μ long. eorum cellula basali 14 × 6, receptaculo 80-90 × 18-21, totus fungus 225-250 μ long.

Hab. in abdomine Anthomyidae sp., Kamerun Africa occ. trop. — Proxima S. Limnophorae sed omnino diversa.

5. Stigmatomyces Borbori Thaxter, Proc. Amer. Ac. of Sc. 51., 1918, 3774 p. 724. — Cellula basali receptaculi infra angustata v. medio constricta, subbasali lata et distincte longiori, diametro subuniformi marginibus parum convexis; cellula pedicellari appendicum, latiori quam longiori, extus convexula, axe plerumque 6-cellulari, basali flavo-brunnea, latiori quam longiori subsymmetrica, caeteris hyalinis sensim angustioribus extus abrupte convexis, ambitu late irregulariterque ellipsoideo; cellula pedicellari perithecii utrimque libera longiore quam latiore, basali in prominentiam abrupte desinente, interiori supra basim cavitatis ascigerae extensa; perithecio apice oblique incurvato; perithecio 110-120 × 35, sporis 35 × 4,5, appendicibus antheridiis inclusis 56 × 25, receptaculo 65-68 × 24, totus fungus 200-240 μ long.

Hab. in Borbori sp. (Dipt.), Kamerun Africa occ. trop. — St. Borboridino proxima species.

6. Stigmatomyces Borboridinus Thaxter, Proc. Amer. Ac. of Sc., 53., 3775 1918, p. 725. — Receptaculo hyalino, basi angustato, cellula pedicellari appendicum breviuscula basi lata subobliqua, appendicibus ex tribus cellulis flavo brunneis efformatis, basali parum obscuriore, parum longiore quam crassiore, subbasali statura minori extus magis convexa parum latiori quam longiori tria antheridia latere interno

conferta apice acuminato-incurvata gerentibus; perithecie erecto y. parte distali leniter curvulo, cum axe cellulae basalis et pedicellaris commune sed ventre distincte divergente; peritheciis 100-120  $\times$  28-32, sporis 36  $\times$  5,5. apparatu pedicellari 35  $\times$  20 supra, 14  $\mu$  infra; appendicibus apicibus antheridiorum inclusis 42  $\times$  22, receptaculo 50-64  $\times$  17-20; totus fungus 190-210  $\mu$  long.

Hab. ad crura Borbori sp. v. affinis. — St. Borbori proxima spec.

7. Stigmatomyces contortus Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3776 p. 726. — Hyalinus; cellula pedicellari et apparenter cellula basali interna pedicellum perithecialem gracilem efformantibus cum receptaculo juxta eum abrupte incurvato et pede ad ventrem approximato, appendicibus libere projectis e parte incurvata receptaculi; cellula basali receptaculi abrupte incurvata et infra parum angustata, subbasali parum longiori et crassiori; perithecio duobus prominentiis donato, 100 × 35, parte pedicellari 37 × 17, sporis 32 × 3-5, appendicibus terminalibus 20 × 8, lateralibus basi 18 × 14, receptaculo 45-50 × 15, appendicibus in exemplaribus junioribus 40 × 9.

Hab. ad alas Borbori sp. (Dipt.) vel generis affinis, Kamerun Africa occ. trop.

8. Stigmatomyces divaricatus Thaxter, Proc. Amer. Ac. of Sc., 53., 1918, 3777 p. 727. — Longiuscula et gracilis ambitu irregulari, subhyalina, appendicibus et perithecio, pedicello incluso, fere symmetrica divergentibus e receptaculo et angulum obtusum efformantibus; caeterum St. Borbori affinis a qua differt praecipue appendicibus quorum cellula principali longiori quam latiori est nec contra, cellula androfori tres antheridia gerenti et a basali distincte separata; peritheciis 120-135 × 28-33, parte pedicellari circ. 68 × 18, sporis 40 × 5, appendicibus 75-86, cellula pedicellari 18 × 14, receptaculo 112-130 × 18-24, totus fungus 280-315.

Hab. in Borboro, Kamerun Africa occ. trop. — S. Borbori valde affinis.

9. Stigmatomyces italicus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3778 Buenos Aires XXVII (1915) p. 71 fig. 37. — Pallidissime melleus, parvus, 300  $\mu$  altus; cellulis subperithecialibus majusculis; perithecio late ovato, 200  $\approx$  55, in collo praelongo, 125  $\approx$  12, apice oblique apiculato producto; synantheridio sessili, 40  $\approx$  12, basim perithecii vix attingente, fusculo, octomero.

Hab. in Borboro (fimetario?), prope Coneglanum, Ven., Ital. bor. — St. papuano Thaxt. valle affinis, synantheridio

breviori tantum distinctus.

- 10. Stigmatomyces pentandrus Thaxt., Proc. Am. Acad. 1917, p. 663. 3779 Hab. in basi artuum posteriorum Muscineae cujusdam ad Borborideas spectantis, pr. Cartago Costa Rica (CALVERT).— Sporidia 36 × 4; perith. 124 μ; venter 42.51 × 42-44; rostrum 50-54 μ apex 22-25 μ; appendix 34 × 10; recept. 110-170 × 22; long. tot. ad apicem perith. 245-315.
- 11. Stigmatomyces Chilomenis Thaxter, Proc. Amer. Ac. of Sc. 53., 3780 1918, p. 748 Subhyalinus, leniter viridi-flavo tinctus; receptaculo parvo, cellula basali angusta subgeniculata, e subbasali minori subtriangulari oblique separata; cellulis axialibus appendicum quatuor subaequalibus parum latioribus quam longioribus, omnibus antheridium unicum gerentibus, terminali typice duos, antheridio terminali excepto; cellula pedicellari perithecii parva et angusta, medio constricta, rugula levi praedita; secundaria minori oblique separata; cellula basali basim cavitatis ascigerae circumdanti, apice summo appendicibus erectis praedita; perithecio e apice appendicum regione basali inclusa 135 μ long., appendicibus longioribus 30 μ long., sporis 28 × 3; appendicibus 60 × basi 7; receptaculo 60 × 18 pede incluso, totus fungus circ. 200 μ long.

Hab. ad elytras Chilomenes lunatae (Dipt.), Nairobi Africa or. britannica. — Inter S. virescenti et eoccinelloidi media.

12. Stigmatomyces Dacinus Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3781 p. 745. - Habitus rigidus, erectus. rectus v. curvulus, parietibus crassiusculis; cellula basali receptaculi pallide brunneo flava, acutata subbasali usque duplo longiore, hyalina, diametro subuniformi; cellula pedicellari appendicum angusta, curvatula; axe appendicum plerumque 8, quandoque 7 cellulis constituto, cellula basali brunneo-flava sterili, caeteris hyalinis oblique septatis, omnibus duobus antheridiis oblique superpositis rectis acutatis donatis; cellula pedicellari perithecii hyalina duplo et ultra longiore quam latiore, basali parva subtriangulari ventre concolori; ventre brunnescenti-flavo, recto, subsymmetrico, late ellipsoideo, cellulis parietalibus subcirculariter dispositis collo parum distincto praedito, parte cacuminali distincte producta; perithecio 140-160 × 42 majoribus usque ad 180 × 50, projectione terminali 10-15 μ long., sporis 42 × 3,2, appendicibus 70-85, receptaculo 86-105, totus fungus 280 μ circ. long. exemplaribus majoribus usque ad 350 μ.

Hab. in Daco sp. (Dipt.), Sarawak Ins. Borneo.

13. Stigmatomyces arcuatus Thaxter, Proc. Amer. Ac. of Sc. 51., 1918, 3782 p. 735. — Flavescens, perithecium et appendicibus rubrescentibus, parum regulariterque arcuatus, curvatura apicali plerumque magis abrupta; axe appendicum quinquecellulari, duobus inferioribus saturatius coloratis, basali latiori quam longiori, sterili, subbasali quandoque latiori, antheridio in cellula quinta solitario, in caeteris, basali excepta, duobus; appendicibus crassiusculis, cellula pedicellari perithecii latiuscula, ventre parum asymmetrico, in parte distali plus v. minus inflato, a collo crasso parum distincto; perithecio 100-112 × 28-35, sporis circ. 28 × 3-5, appendicibus circ. 50 × 12, receptaculo 45-50 × 16, totus fungus 180-200 μ long.

Hab. ad crura et alas Diopsidis sp. (Dipt.), Kamerun Africa occ. trop.

14. Stigmatomyces longirostratus Thaxter, Proc. Amer. Ac. of Sc. 53., 3783
1918, p. 736. — Eximic elongatus, undique pallide sordideque flavobrunnescenti, cellula basali infra parum curvatò angustata; cellula
pedicellari appendicum quandoque circ. longiore quam latiore; appendicibus leniter divergentibus, elongatis, angustis, axe 12-cellulari, basali sterili parum longiori quam latiori saturatius colorata, subbasali concolori, caeteris omnibus dua antheridia gerentibus, ultima excepta unum tantum gerenti; cellula pedicellari perithecii cum subbasali concolori; apice perithecii extus curvulo,
lato, leniter inflato; perithecio 320 × 40, sporis 35 × 4, appendicibus
140 × 14, receptaculo 115 × 25, totus fungus usque 500 μ et ultra
longo.

Hab. ad alas Diopsidis sp. Kamerun, Africa occ. trop.

15. Stigmatomyces porrectus Thaxter, Proc. Amer. Ac. of Sc. 53., 3784
1918, p. 737. — Longiusculus, ambitu irregularis; cellula basali receptaculi obconica, leniter flavido tincta, subbasali omnino hyalina, abrupte angustata, plerumque distincte breviori, subisodiametrica; cellula pedicellari appendicum parvula, subirregulari duplo circ. longiore quam latiore, infra hyalina supra flavescenti v. flavo-brunnescenti; cellula basali appendicum obscuriori, magis lata quam longa sterili, subbasali concolori, minuta depressa subtrigona, duobus antheridiis praedita; basi appendicum ad angulum acutum (45°) divergenti; cellula pedicellari perithecii lata, omnino hyalina, ultra insertionem appendicum, elongata, cellula secundaria subtrigona; ventre subasymmetrico ad basim inflato, in parte distali acutato, cellulis parietalibus spiraliter dispositis, apice parum expanso; perithecio 125-155 × 35-42, sporis circ. 24 × 2-5, appendi-

cibus 52-60 \* 15, receptaculo 85-140 \* 20-24, totus fungus 250-350  $\mu$  long.

Hab. ad alas et abdominem Diopsidis sp. (Dipt.), Kamerun, Africa occ. trop.

16. Stigmatomyces schwabianus Thaxter, Proc. Amer. Ac. of Sc. 53., 3785 1918, p. 738. — Undique sordide flavescens; receptaculo parvo, curvulo, cellula basali infra acutata, subbasali parum breviori et latiori; cellula pedicellari appendicum in parte distali parum prominenti, appendicibus suberectis leniter incurvatis; antheridiis regulariter seriatim superpositis, cellula basali lata, obscuriori, sterili vix longiori quam latiori, subbasali parva subtrigona, cellulis caeteris 61 axialibus duobus antheridiis praeditis; ventre plus minus inflato, cellulis parietalibus subanulatim dispositis, collo aegre distinguendo sed in parte distali constricto, curvato; perithecio 175-280 × 30-42, sporis circ. 40 × 5, appendicibus 65-80 × 12-14, receptaculo 60-90 × 21-24, totus fungus 250-400 μ long.

Hab. ad crura et ad basim alarum Diopsidis sp., Kamerun, Africa occ. trop — Proxima St. Diopsidi et porrecti.

- 17. Stigmatomyces chilensis Thaxt., Proc. Amer. Acad. 1917, p. 685. 3786 Hab. in artubus et abdomine Discocerinae sp. (Dipt.), Concepcion, Chili.— Sporidia  $30 \times 3$ ; perith.  $130\text{-}160 \times 55\text{-}64 \times 35\text{-}42$ ; appendix  $52\text{-}60 \times 18$ ; recept. 90-140; long. total. 250-300, raro usque  $400~\mu$ .
- 18. Stigmatomyces Discocerinae Thaxt., Proc. Amer. Acad. 1917, p. 687. 3787
  Hab. in artubus et thorace Discocerinae sp. in Jamaica et Trinidad. Sporidia 30 × 3; perith. 95-105 × 30-35; appendix 30 × 12; recept. 35-55 × 12-15; long. tot. ad apicem perith. 125-175 μ.
- 19. Stigmatomyces caribbeus Thaxt., Proc. Amer. Acad. 1917, p. 688. 3788 Hab. in abdomine speciei Discocerinae, Panama et Jamaica. Sporidia  $30 \times 3$ ; perith. 122-140, venter  $70 \times 32$ , rostr. 65-70 × 10-12; append. 40-50  $\mu$ ; recept. 70-100  $\times$  15-20; long. tot. ad apicem perith. 210-265  $\mu$ .
- 20. Stigmatomyces ventricosus Thaxter, Proc. Amer. Ac. of Sc. 53., 3789 1918, p. 743.— Breviusculus et crassiusculus; receptaculo hyalino, cellula basilari infra plerumque parum curvata et e pede acutata, subbasali multo minori, plerumque magis lata quam longa; axe appendicum e cellulis 4 sensim minoribus efformato, quarta minori unum antheridium gerenti, duobus superpositis superiori spinosa, omnibus aliis duo antheridia gerentibus; ventre obscuro brunneo-succineo, brevi crasso parum divergenti; peritheciis 75-85 μ,

sporis  $30 \times 3$ , ventre  $42-48 \times 30-36$ , appendicibus  $45-50 \times 10$ , receptaculo  $42 \times 18$ , totus fungus  $120-140 \mu$  long.

Hab. in abdomine speciei gen. affinis Discocerinae, Kamerun, Africa occ. trop. – St. Discocerinae proxima sed ventre inflato omnino diversa.

21. Stigmatomyces subinflatus Thaxter, Proc. Am. Ac. of Sc. 53., 1918, 3790 p. 739. — Rectus v. axis receptaculi leniter curvatus, pallide flavus; receptaculo subhyalino, cellula basilari et pedicellari appendicum et parte inflata infra apice rubrido tinctis: cellula basilari receptaculi duplo longiori quam basilari; cellula pedicellari appendicum duplo longiore quam latiore, leniter rubrida, margine externo recto v. leniter convexo; axe appendicum caeterum tricellulare, omnibus antheridium solitarium gerentibus; ventre longiusculo et angusto symmetrice inflato spiraliter cristato, perithecio sub apice abrupte inflato; perithecio 110-120 × 28-30, sporis 18 × 2-5, ventre 68 μ, appendicibus 35 × 9, receptaculo 45-55 × 16, totus fungus 150-175 μ, longo.

Hab. ad crura anteriora Drosophilae sp. (Dipter.), Kamerun Africa occ. trop.

22. Stigmatomyces varians Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3791 p. 740. — Symmetrice subsigmoideus; perithecio eximie elongato, partibus supra receptaculum positis pallidis, fere flavo-citrinis cellulis duobus inferioribus appendicum cellulam basalem divisam simulantibus, inferiori sterili, superioribus duo, tertia unum tantum antheridia gerentibus; appendicibus erectis v. quamioque leniter divergentibus; axe receptaculi et ventris coincidenti recto; ventre magnitudine et forma variabili, collo crasso curvato et e basi lata leniter acutato v. magis angustato, basi constricto et in parte distali parum expanso; perithecio 120-140 e 30-35, sporis 35 × 4, receptaculo 45-55 × 20-26, appendicibus 42-45 × 8-10, totus fungus 190-225 µ long.

Hab. in abdomine speciei ignotae Drosophilidarum, Kamerun Africa occ. trop. — A typo S. Sigalloessae, Scaptomyzae, Drosophilae spectans sed maxime variabilis et tunc aegre diagnosticandum.

23. Stigmatomyces grenadinus Thaxt., Proc. Am. Acad. 1917, p. 662. 3792 Hab. in artubus Limosinae ferrugineae (Dipt.), Grand Etang Grenada. — Sporidia 18 × 3; perith. 85-100 μ, venter 35-38 × 24-28, rostrum 35-38 × 11, apex 18 μ; appendix 35 μ; recept. 50-70 × 14; long. tot. ad apicem perithecii 150-185.

24. Stigmatomyces proliferans Thaxter, Proc. Amer. Ac. of Sc. 53., 8793 1918, p. 733. - Rectus gracilis, pallide flavus praecipue venter: receptaculo hyalino, basi appendicum succineo-brunneo tincto; recentaculo dimidium circ. totius fungi longo; cellula pedicellari appendicum longiore quam crassiore, axe appendicum plerumque ex 7 cellulis oblique superpositis sensim minoribus efformato, omnibus terminali excepta, antheridiferis, antheridiis angustis oblique insertis ventre et collo aegre distinguendis, cellulis ultimis superioribus ramulos angustis dichotomos coralloides apice inflatos gelatinosos efformantibus; cellulis pedicellaribus perithecii longioribus quam crassioribus, lateraliter laciniatis, subaequalibus; perithecio erecto, angustulo, parte distali parum longiore quam ventre leniter inflato, collo non abrupte distincto, ventre et collo spiraliter dextrorse ornatis. Peritheciis 140 > 30 (ventre) > 14 (collo), sporis 30  $\times$  3,6, appendicibus 50-55  $\mu$ , usque ad apicem ramulorum 70-80  $\mu$ . receptaculo 120-140 × 18; totus fungus 280-315 μ long.

Hab. ad thoracem Limosinae punctipennis (Dipter.), Kamerun Africae occ. trop.

25. Stigmatomyces platystoma Thaxter, Proc. Amer. Ac. of Sc. 53., 3794 1918, p. 732. - Totus plus minus curvatus v. tantum ad apicem; receptaculo hyalino; axe appendicum plerumque ex 7 cell. efformato basali et subbasali subaequalibus obscurioribus, caeteris sensim minoribus, omnibus convexis septis obliquis praeditis, quatuor inferioribus duo antheridia interne posita gerentibus; cellulis duobus pedicellaribus longioribus quam crassioribus, ventre e basi angustata conoideo, in parte distali duplo latiore, apice lato abrupte distincto parum inflato; peritheciis 85-100, sporis 30 \* 3,5, venter  $45-55 \times 30$  32, basi 16  $\mu$  lato, apice circ.  $20 \times 12$ , appendicibus 55-65, receptaculo 42-44 × 15, totus fungus 155-160 μ long.

Hab. ad crura Limosinae punctipennis, Kamerun Africa occ. trop. - St. prolifero proxima species.

26. Stigmatomyces Limosinoides Thaxter, Proc. Amer. Ac. of Sc. 53., 3795 1918, p. 730. - Subhyalinus v. flavescens, leniter sigmoideus, perithecium brunneo-flavescens; receptaculo infra curvato longiusculo; cellula pedicellari appendicum duplo et ultra longiore quam latiore, cellulam pedicello perithecii etiam superante; axe appendicum angustato 6-8 cellulis efformato, basali parva brevi, pallide succineo-brunnea, caeteris rotundatis, apicem versus sensim minoribus; ventre perithecii flavido brunneo, fere symmetrico, subellipsoideo, crasse tunicato, erecto v. leniter interiori parte reclinato;

collo lato ventris longiore, apice brevi quandoque leniter inflato. vertice subtruncato infra abrupte compresso; perithecio 100-125 \* 35-42, sporis  $25 \times 3.5$ , receptaculo  $100-130 \times 18-22$ , appendicibus 50-60 μ, totus fungus 225-300 μ long.

Hab. ad crura posteriora Limosinae punctipennis. [Dipt.], Sarawak Borneo. - St. papuano Thaxt. valde affinis et verisimiliter varietas ejusdem.

27. Sligmatomyees distortus Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3796 p. 728. - Distincte curvatus, hyalinus dein pallide flavido tinctus. ventre obscure brunneo-flavo, appendicibus infra pallide brunnescentibus, e basi oblique dispositis, e cellulis quatuor persistentibus efformatis, inferioribus sublatioribus, subaequalibus brunneis. e cellulis duobus parvis evanescentibus terminatis (f antheridiis); perithecii apice partibus indistinctis terminato sed prominentia breviter rotundato-digitiformi producto; peritheciis 85-100 × 26-28. projectione ejusdem 10 \* 5, sporis 24 \* 3 5, receptaculo 40-50 \* 14, appendicibus circ. 50 \mu, totus fungus 150 \mu long.

Hab. ad capitem Limosinae punctipennis [Dipt.], Kamerun, Africa occ. trop.

28. Stigmatomyces tortimasculus Thaxter, Proc. Amer. Ac. of Sc. 53., 3797 1918, p. 734. - Brevis crassus v. plus minus elongatus gracilis. subhyalinus, ventre perithecii pallide brunneo-flavo excepto; receptaculo varie elongato, e basi angustato curvato; axe appendicum subirregulari, curvo, quinquecellulari, terminali minuta obtuse mucroniformi, omnibus duo antheridia gerentibus, collo antheridiorum longo, varie curvato et irregulariter divergenti; ventre perithecii variabile, latiusculo, brevi et abrupte inflato, collo crasso et leniter angustato, apice parum distincto variabili; perithecio 88-100 × 32 v. usque 120 × 35, sporis 20 × 3,5, receptaculo 42-75 \* 12-14, v. usque 130 \* 14, appendicibus circ. 35 μ longis, totus fungus  $150-200 \mu$  v. usque  $275 \mu$  long.

Hab. in Limosinae spec., exemplaribus majoribus in tho. race, minoribus ad crura, Sarawak Borneo.

29. Stigmatomyces laticollis Thaxter, Proc. Am. Ac. of Sc., 53., 1918, 3798 p. 729. — Subhyalinus, receptaculo breviusculo, cellulis subaequalibus septo obliquo separatis, basali infra angustata, cellula pedicellari appendicum parum latiori cellulae pedicell, perithecii cui approximata; axe appendicum 6-9 cellulis circiter efformato, basali parva brunnea, depressa parte distali latiore; cellula pedicellari perithecii e cellula appendicum parum superata; ventre asym-

metrico, in parte distali latiore; parte distali perithecii indifferentiata, valida, diametro undique subaequali, apice late rotundato extus incurvato; peritheciis  $100\text{-}105 \approx 28\text{-}32$  (ventre)  $\approx 14$  (parte distali); sporis circ.  $18 \approx 2.5$ ; appendicibus circ.  $40\text{-}50~\mu$ , receptaculo  $40\text{-}50~\mu$ , totus fungus  $150\text{-}175~\mu$  long.

Hab. in abdomine Limosinae sp. (Dipt.), Kamerun Africa occ. trop. - St. affini ventris conformatione proxima, sed differt regione cellulae basali longiori, et parte distali uniformiter crassa, et apice late rotundato obtuse curvato.

- 30. Stigmatomyces longicollis Thaxt., Proc. Am. Acad. 1917, p. 660. 3799 Hab. in artubus poster. et abdomine L i m o s i n a e sp., Balaclava, Clarkstown Jamaica. Sporidia  $18-20 \times 2,5$ ; perith. 245-450  $\mu$  venter  $56 \times 35-36 \times 26-30$ ; rostrum  $190-380 \times 14$ ; apex 22; appendix  $90-120 \mu$ ; recept.  $40-45 \times 18-20$ ; long. tot. ad apicem perithecii  $300-525 \mu$ .
- 31. Stigmatomyces crassicollis Thaxt., Proc. Am. Acad. 1917, p. 661. 8800 Hab. in abdomine et artubus Limosinae sp., Balaclava, Mandeville Jamaica. Sporidia 20-22 × 2; perith. 140-325 μ, venter 35-60 × 38-64; rostrum 350 × 25, apex 18 μ; appendix 35-70; recept. 50-70 × 22-35; long. tot. ad apicem perithecii 200-430 μ.
- 32. Stigmatomyces affinis Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3801 p. 723. Infra hyalinus, infra cellula pedicellari pallide flavidus; habitu rigido, recto v. curvulo, receptaculo basim versus conoideo-attenuato, cellula basali aliquanto longiore, pede parvo, supra brunneo-fumoso; cellula pedicellari perithecii et appendicum e latere horizontaliter dispositis subaequalibus, secundaria statura minori sed parum longiore; axe appendicum extus convexo plerumque 8-cellulari; ventre perithecii crassiusculo infra medio plus v. minus abrupte inflato, supra quadrilobulato apice papillato; peritheciis 95-105 × 28-32, sporis circ. 25 × 3,5, appendicibus circ. 50 μ long., receptaculo 35-50 × 16, totus fungus 150-175 μ long.

Hab. in Limosinae sp. [Dipt.], Kamerun Africa occ. trop. — St. papuano proximus, sed differt caracteribus perithecii et situ cellulae pedicellaris.

33. Stigmatomyces platensis Speg., Laboulb. Arg. p. 676, fig. 208. — 3802 Parvus, totus hyalinus; cellula basali obconica subbasali tumida breviore, androsticho breviter pedicellato 10-12-antheridiifero, antheridiis inferis fumosis majoribus, ceteris hyalinis cito minoribus; perithecio gynostico 3-cellulari, pedicello androstichi adnato, imposito, sublageniformi, parte sporifera ovato-tetragona sursum abrupte

valideque contracta grosse 4-gibbosa, rostro ostiolari subcylindrico, leniter arcuato, ostiolo conico angustiore, ore obliquo acuto donato, coronata.

Hab. in alis et abdomine muscae parvulae, L i m o s i n a e sp., La Plata Argent. — Perith. sine ped. 75-80  $\approx$  20-22; recept. 50-55  $\approx$  20; alt. tot. 140-150  $\mu$ .

34. Stigmatomyces papuanus Thaxt., Syll. XVI p. 681. — Stigm. ita. 3803 licus Speg. 1915. — var. leiestoma R. Maire, Bull. Soc. Hist. Nat. Afrique du Nord, t. 11., 1920, Extr. p. 17, fig. 4. — A typo differt perithecio apice levi obtuso, appendice mascula ad septa omnia constricto.

Hab. in Leptocera (Limosina) fontinalis Fall. [Dipt.], Djurdjura or. prope Tizi-n-Kouilae, Algeria Africa bor.

35. Stigmatomyces excavatus Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 8804 p. 742. — Erectus v. leniter sigmoideus; appendicibus longis, gracilibus, attenuatis, plerumque rectis cum antheridiis extus positis v. quandoque lateralibus; receptaculo crasso tunicato, brevi crasso; cellula pedicellari appendicum lata, circa cellulam basalem prominentiam rotundatam efformanti; perithecio gracili acuminato, ventre triplo v. quadruplo longiore quam latiore; perithecio 140° 200 × 20-28, sporis circ. 25 × 3, regione basali et pedicellari 35 × 22, receptaculo. 80 × 25, appendicibus 70-95 × 7, eorum cellula pedicellari 35-45 × 10-15, totus fungus 280-335 μ long.

Hab. in abdomine speciei gen. Not i p h i la e affinis [Dipt.], Kamerun Africa occ. trop.

- 36. Stigmatomyces Notiphilae Thaxt., Proc. Amer. Acad. 1917, p. 662. 3805 Hab. in abdomine et artubus N o t o p h i l a e , Balaclava, Jamaica et Grenada. Sporidia  $36 \times 4.5$ ; perith.  $185\text{-}200 \times 30\text{-}35$ ; cell. bas.  $30\text{-}40 \times 26\text{-}28$ ; recept.  $70 \times 25$ ; long. tot.  $325\text{-}400 \ \mu$ ; appendix  $65\text{-}75 \times 10$ .
- 37. Stigmatomyces ortalidanus Thaxter, Proc. Amer. Ac. of Sc., 53., 8806
  1918, p. 744. Longus et gracilis, rectus v. curvulus; cellula basali receptaculi acutata infra curvula crassitudine secundaria tegumenti demum brunneo nigrescenti et crassitudine primaria flavescenti; appendicibus longis, angustis et in parte distali attenuatis 8-10 cellulis axialibus efformatis; ventre perithecii demum flavobrunnescenti triplo et ultra longiore quam latiore, recto subsymmetrico; venis colli et ventris saepe conspicuis corrugatis quandoque aegre visibilibus sed aetate majoribus; regione basali et pedicellari perithecii 109-210 = 30-35, ventre 90 = 105 = 30-38, collo

 $122 \times 20$ -28 v. minus, apice 25-30 × 12, sporis circ.  $45 \times 4$ , appen dicibus 106-125  $\mu$  long. basi 15  $\mu$  cr., cellula pedicellari 50-60 × 14-18, receptaculo 250-280 × 32, totus fungus usque  $740 \times 35$ -40.

Hab. in abdomine Ortalidaearum sp. (Dipt.), Kamerun Africa occ. trop.

- 38. Stigmatomyces inflatus Thaxt., Proc. Amer. Acad. 1917, p. 664. 3807 Hab. in superf. sup. abdominis S a p r o m y z a e sp., Orizaba Mexico (Mann). Sporidia  $18 \times 3.5$ ; perith basis et pes  $54.62 \times 18.23$ , venter  $55.62 \times 38.45$ ; rostrum  $90.110 \times 15$ , apex  $26.30 \times 15$ ; appendix  $55.62 \mu$ ; recept.  $100.120 \times 18$ ; long. total. ad apicem perith. 310.390.
- 39. Stigmatomyces hexandrus Thaxter, Proc. Amer. Ac. of Sc. 53., 3808 1918, p. 746. Habitus rigidus erectus; receptaculo hyalino recto v. curvulo, cellula basali dimidium subbasali longiore; axe appendicum tricellulari, inferioribus antheridia bina tertia unum tantum gerentibus, antheridium sextum terminali uno latere caracteristice inflato spinoso; superficie ventralis minute et vix conspicue granulosa, collo ventris longiore medio leniter constricto; perithecio 120-190 × 24-28, sporis 28-30 × 3,5, appendicibus 55 × 10, receptaculo 120-190 × 24-28, totus fungus usque 280-300 long. vel etiam 370 × 42.

Hab. ad crura et abdominem Trypetide arum sp. [Dipt.], Kamerun Africa occ. trop. — S. separato valde affinis.

40. Stigmatomyces separatus Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3809 p. 747. — Habitus rigidus erectus, collo et apice leniter incurvato; receptaculo hyalino, subisodiametrico, v. leniter ad apicem acutato; cellula pedicellari appendicum leniter subbasalis latiori, circiter duplo latiori quam longiori, axe quinquecellulari, duobus inferioribus plerumque tria antheridia tertia et quarta duo, quinta unum tantum gerentibus; cellula pedicellari perithecii tantum longa quam lata, basali subaequali, ventre recto infra leniter et symmetrice inflato, superficie leniter granulosa, collo subaequilongo leniter angustato vel subisodiametrico, apice aegre distinguibili; perithecio 155-176 × 28-35, sporis 30 × 3,5, appendicibus 50-65 × 7, receptaculo 70-80 × 18-20, totus fungus 210-280 μ long.

Hab. in capite Trypetidearum sp. [Dipt.], Kamerun Africa occ. trop.

41. Stigmatomyces Euconni Picard, Bull. Scient. France Belgique t. 3810 50., 1916-1917, p. 447, tab. VI fig. 4.—Hyalina sed perithecia et antheridia brunneo-rubescentia; receptaculo parum manifesto e duo-

bus cellulis parvis omnino hyalinis efformato, subbasali apice pedunculum perithecii e latere appendicem gerentem; pedunculo perithecii tenui elongatissimo; perithecio fusoideo-inflato. 125-135  $\mu$  longo; appendice (70-75  $\mu$  longa) 3 antheridia gerente, pedunculo brevi rotundato pallide rubescenti ad receptaculum lateraliter inserto, apice cellulis tribus constituto, omnibus antheridium singulum ovoideum gerentibus, antheridio terminali lateraliter spinulifero. Totus fungus 220-230  $\mu$  long.

Hab. ad crura Euconni Wetterhali (Coleopt.), Lattes (Herault), Gallia (LAVAGNE).

- 42. Stigmatomyces Aciurae Thaxt., Proc. Amer. Acad. 1917, p. 668. 8811 Hab. in artubus et abdomine A c i u r a e sp. et E u s i n a e sp., Mandeville, Jamaica. Sporidia  $50.55 \times 4.5$ ; perith. 64-70  $\times$  78, rostr.  $55.75 \times 24$ , appendix  $55 \times 18$ , cell. bas.  $20 \times 12$ , pes  $35 \times 12$ ; recept.  $150.350 \times 18.27$ ., long. tot. ad apicem perith.  $330.550 \mu$ .
- 43. Stigmatomyces Anoplischii Thaxt., Proc. Amer. Acad. 1912 p. 176, 3812 Speg. Lab. Arg. fig. 204.

Hab. in elytris A n o p l i s c h i i sp., Buenos Aires et La Plata Argent. et D i a r t e r i i p u l l a t i, Montevideo, Buenos Aires, Sta Catalina et La Plata, Arg. (SPEGAZZINI). — Sporidia 60-65  $\times$  8; perith., incluso pede (8  $\mu$ ), 280-330  $\times$  45; appendix, sine pede, 50-60  $\times$  25; antherid. 25  $\times$  12; recept. incl. cell. pedunc. appendicis 50-55  $\times$  26; longit. tot. ad apicem perith. 310-390  $\mu$  ad apicem appendicis 130  $\mu$ .

- 44. Stigmatomyces Clinocerae Thaxt., Proc. Am. Acad. 1917, p. 659. 3813 Hab. in abdomine infer. Clinocerae binolatae, Tecoma Washington Amer. bor. Sporidia 18 ≠ 2,8; perith. 140-170 ≠ 30-36; appendix longier 76 ≠ 8-10; receptae. 60-88 ≠ 14-18; long. tot. ad apicem perithec 260-300.
- 45. Stigmatomyces Diapetis Thaxt., Proc. Am. Acad. 1917, p. 657. 3814
   Hab. in D i a p e t i s sp., Mandeville, Jamaica, Panama, Trinidad. Sporidia 38-40 × 3,5; perith. 120-150 μ, venter 50-60 × 35-50; appendix 50 70 × 20; recept. 70-90 × 17-20; long. tot. 280-300 μ.
- 46. Stigmatomyces Eusinae Thaxt., Proc. Amer. Acad. 1917, p. 665. 3815 Hab. in variis partibus E u ş i n a e sp., Mandeville, Jamaica.— Sporidia  $27 \times 3.6$ ; perithecii pes et pars basil.  $60.70 \times 35$ , venter  $75.100 \times 50.55$ , rostr.  $46.60 \times 18.20$ , apex  $15 \times 18.20$ ; appendix  $80.55 \times 12.5$ ; recept.  $80.150 \times 20$ ; long. tot. ad apicem perithecii  $300.400 \mu$ .

- 47. Stigmatomyces verruculosus Thaxt., Proc. Am. Acad. 1917, p. 667. 3816 Hab. in abdomine E u s i n a e sp., Mandeville Jamaica et Grenada. Sporidia 28 × 4; perith. 35 × 32, venter 48-55 × 40, rostrum 62-75 × 18, apex 19-21 × 14; appendix 60 μ, cell. basil. 21 × 7,5, pes 27 × 10,5; long. tot. ad apicem perithecii 280-312 μ.
- 48. Stigmatomyces arophilus Speg., Laboulb. Arg. p. 677, fig. 209. 3817 Parvulus receptaculo fumoso, cellula basali triangulari, subbasali anguste segmentiformi, pedicello peritheciali brevi, perithecio subcylindraceo recto apice abruptiuscule in ostiolo cylindrico infuscato leniter incurvato oreque subtruncato producto; appendice erecta simplice subgracili 5-6-mera, articulis 1-4 superis monantheridiatis.

Hab. pervulgatus in abdomine Heterotopis for micetor um in nidis Attae Lundi, Sta Catalina B. A. Florencio Varela et La Plata, Arg. — Perithec. c. ped. 80-85 × 15-18; app. 25-50 × 5-8; alt. tot. 100-120 μ.

49. Stigmatomyces montevideensis Speg., Laboulb. Arg. p. 675, fig. 207.— 3818
Majusculus; cellulis receptaculi angustis, clongatis vix fumosis;
androsticho 6-7-mero infuscato, ventre antheridiorum paria 5 fulcente; perithecio lanceolato-fusoideo obsolete subtoruloso subhyalino, basi fuscescente, pedicello angusto longiusculoque fulto.

Hab. in abdomine Lathrobii dimidiati, Montevideo — Perith. 185-200  $\times$  36-38; recept. 125-130  $\times$  15-18; alt. tot. 350-360 μ.

- 50. Stigmatomyces curvirostris Thaxt., Proc. Amer. Acad. 1917, p 671. 3819 Hab. ad apicem abdomnis Paralimnae ciliatae, Balaclava, Mandeville et Clarkstown Jamaica. Sporidia  $28 \times 2.5$ ; perith.  $195-225 \times 30$ ; appendix 80-90, pes  $100-118 \times 12$ ; recept.  $58-70 \times 15$ ; long. tot. ad apicem perith.  $300-390 \times 30-40$ .
- 51. Stigmatomyces rostratus Thaxt., Proc. Amer. Acad. 1917, p. 672. 3820 Hab. in abdomine Parali m nae decipientis in Jamaica et Grenada. Sporidia  $28 \times 3$ , perithecii venter  $100\text{-}115 \times 35\text{-}45$ , rostrum  $90\text{-}100 \times 16\text{-}18$ ; recept.  $80\text{-}95 \times 22\text{-}26$ ; appendix 75-85, pes  $35 \times 16$ , cell. basil.  $28\text{-}30 \,\mu$ , long. tot. ad apicem perithecii  $300\text{-}350 \,\mu$ .
- 52. Stigmatomyces Paralimnae Thaxt., Proc. Amer. Acad. 1917, p. 674. 3821 Hab. in abdomine, artubus et alis Paralimnae ciliatae, Arkansas Jamaica et Grenada. Sporidia 35 × 4; perith. venter 60-75 × 22-28; long. a pede ad basim ventris 50-70 × 22-30; appendix 40-45; long. tot. ad apicem perithecii 150-175 μ.
- 53. Stigmatomyces jamaicensis Thaxt., Proc. Am. Acad. 1917, p. 676. 3822

Hab. in alis et artubus Paralim nae ciliatae, Jamaica. — Sporidia  $30 \times 4$ ; perith.  $80-115 \times 28$ ; appendix  $60-75 \times 12$ , pes  $30-50 \times 10-12$ , cell. basil.  $8-10 \mu$ ; recept.  $38-46 \times 15-18$ ; long. tot. ad apicem perith.  $135-195 \mu$ .

- 54 Stigmatomyces brevicellis Thaxt., Proc. Am. Acad. 1917, p. 677. 3823 Hab. in capite, thorace et artubus Psilopae sp., Balaclava Jamaica. Sporidia  $35 \times 3.5$ ; perith. 85-95  $\mu$  venter 55-64  $\times$  28-34, rostr. 18  $\mu$ , appendix  $50.52 \times 8$ ; recept.  $42.54 \times 14.16$ ; long. tot. ad apicem perith. 140-170  $\mu$ .
- 55. Stigmatomyces indentatus Thaxt., Proc. Amer. Acad. 1917, p. 678. 3824 Hab. in superf. super. abdominis Psilopae sp., Arkansas, Orizaba Mexico. Sporidia 24 × 4; perith. 130-147, venter 70-77 × 35-42; recept. 85-125 × 22; appendix 42; long. tot. ad apicem perithecii 210-315 μ.
- 56. Stigmatomyces Ochtheroideae Thaxt., Proc. Amer. Acad. 1917, p. 679. 3825 Hab. in superf. sup. thoracis O c h t h e r o i d e a e spp., Trinidad, Panama (ROVER), Grenada. Sporidia 36 × 4; perith. 100-110 × 30-35; appendix 45 50 × 16; receptaculum, 55-65 × 14-16; long. tot. ad apicem perith. 150-175 μ.
- 57. Stigmatomyces compressus Thaxt., Proc. Am. Acad. 1917, p. 681. 3826 Hab. in artubus et alis Psilopae sp., Mandeville, Balaclava Jamaica et Ochtheroideae glaphropodae, Mandeville et Porus Jamaica. Sporidia 30 × 3,8; perith. 120-140 × 38-42; appendix 55 μ; recept. 70-100 × 16-20; long. tot. ad apicem perithecii 220-310.
- 58. Stigmatomyces micrandus Thaxt., Monogr. Lab. II p., t. 46 fig 24— 3827 var. Atissae Thaxt., Proc. Am. Acad. 1917, p. 682.— A typo differt statura minore, 180-200 μ long.—Hab. in capite, thorace, antennisque minutae, atrae speciei Atissae in India occid.
- 59. Stigmatomyces Psilopae Thaxt., Proc. Amer. Acad. 1917, p. 682. 3828 Hab. in insecto Psilopae sp. in Jamaicae plur. loc. et Grenada. Sporidia  $35 \times 3.5$ ; perith. venter  $85 \times 42-62$ , rostrum 70-140 × 18; recept.  $78-260 \times 20-25$ ; appendix  $52 \times 14$ ; longit. tot. ad apicem perith. 300-540.
- 60 Stigmatomyces llytheae Thaxt., Proc. Amer. Acad. 1917, p. 683-3829 Hab. in thorace, artubus anterior. Ilytheae spp. in Jamaica, Grenada, Kamerun, Borneo et Maine, in formis variis In typo: sporidia 35 × 3,5; perith. 155-192 μ, venter 70-98 × 28-42; appendix 56 × 16; recept. 100-110 × 30; long. tot. ad apicem perithecii 210-300 μ.

- 61. Stigmatomyces ambiguus Thaxt., Proc. Amer. Acad. 1917, p. 689. 3830 Hab. in alis Ochtheroideae, Grenada et Venezuela. Sporidia  $35 \times 3.5$ ; perith. 140-155, venter  $60-70 \times 30-32$ ; recept.  $88-105 \times 21$ ; appendix  $60 \times 15$ ; long. tot. ad apicem perith. 220-280.
- 62. Stigmatomyces Ochtherae Thaxt., Proc. Amer. Acad. 1917, p. 691. 3831
  Hab. in superf. sup. abdominis Ochtherae, Balaclava Jamaica. Sporidia 35 × 3,5; perith. 100 × 31-35; appendix 70-85 × 15-20; recept 66-85 × 18-25; long. tot. ad apicem perith. 160-180 μ.
- 63. Stigmatomyces borealis Thaxt., Proc. Amer. Acad. 1917, p. 692. 3832
  Hab. in artubus Parydrae imilantis, Kittery Point,
  Maine. Sporidia 34 ~ 3,5; perith. 96-110 ~ 30-40; appendix 48 μ;
  recept. 60-85 ~ 22-24; long. tot. ad apicem perithec. 150-200 μ.
- 64. Stign.atomyces lingulatus Thaxt., Proc. Amer. Acad. 1917, p. 693. 8833 Hab. in superf. sup. abdominis Parydrae humilis, Balaclava, Jamaica. Sporidia  $38 \times 4.5$ ; perith. venter  $70-80 \times 40$ , long.  $90-100 \times 14-18$ ; append.  $75-80 \times 12-14$ ; cell. basil.  $24 \times 10$ , pes  $30 \mu$ , recept.  $115-135 \times 24-28$ , long. tot. ad apicem perith.  $300 \mu$ .
- 65. Stigmatomyces pinguis Thaxt., Proc. Amer. Acad. 1917, p. 694. 3834 Hab. in superf. inf. alae sinistr. Parydrae pinguis, Fayetteville Arkansas.— Sporidia 28 × 4 × , perithec. 120-135 μ, venter 65-78 × 40-55, rostr. 16 μ cr.; appendix 60 × 12; recept. 65-98 × 22-26, long. tot. ad apicem perithecii 200-260.
- 66. Stigmatomyces protrudens Thaxt., Proc. Amer. Acad. 1917, p. 695. 3835 Hab. in thorace, alis et abdom. sup. Parydrae pinguis. Fayetteville Arkansas. Sporidia  $30 \times 4$ ; perith.  $120 \cdot 140 \times 30 \cdot 45$ . ejus processus  $16 \mu$ ; receptac.  $70 \cdot 100 \times 20$ ; appendix  $65 \cdot 70 \times 15$ , pes  $25 \cdot 27 \times 12 \cdot 14$ ; long. tot. ad apice perith.  $225 \cdot 275$ .
- 67. Stigmatomyces Parydrae Thaxt., Proc. Amer. Acad. 1917, p. 696. 3836 Hab. in artubus, alis et thorace Parydrae quadrituberculatae, Fayetteville, Arkansas. Sporidia 30 × 4; perith. venter 60-75 × 35-40, basis et pes 18 × 27; recept. 45 × 20-22, long. maxima 80 μ; appendix 60-70 × 16; long. tot. ad apicem perithecii 180-225 μ.
- 68. Stigmatomyces Sigaloessae Thaxt., Proc. Amer. Acad. 1917, p. 698. 3837

  Hab. in superf. sup. abdominis Sigaloessae, Mandeville

  Jamaica. Sporidia 28 × 4; perith. basis et pes 18-20 × 32-35,

  venter 75-82 × 42-47, rostr. 66 × 46-54, appendix 45-50 × 8-9, pes
  16-18 × 8; recept. 72-156 × 23-28; long. tot. ad apicem perithecii
  225-310 μ.
- 69. Stigmatomyces Leucophengae Thaxt., Proc. Am. Acad. 1917, p. 699. 3838

Hab. in thorace et abdomine Leucophengae sp., Fayette-ville Arkansas. — Sporidia  $28 \times 3.5$ ; perith. basis et pes  $30 \times 20$ , venter  $58-65 \times 20-24$ ; rostrum et apex  $23-27 \times 11.5$ ; appendix  $55-60 \times 8$ ; recept.  $26-30 \times 24$ ; long. tot. ad apicem perithecii  $150-210 \times 27$ .

- 70. Stigmatomyces Streblae Thaxt., Proc. Amer. Acad. 1917, p. 700. 3839 Hab. in artubus et alis Streblae vespertilion is advespertiliones, Venezuela (CARRICKER). Sporidia  $28 \times 3.5$ ; perith. 95-105, rostr.  $35 \times 16$ , venter  $50.56 \times 24-28$ ; appendix  $28 \times 18$ ; recept.  $65-80 \times 16-20$ , longit. tot. 170-200  $\mu$ .
- Stigmatomyces Nycteribiidarum Thaxt., Proc. Amer. Acad. 1917, 3840
   p. 702.

Hab. in abdomine infer. N i c t e r i b i d e a e spec. parasiticae in Antibaeo Grenadino, Grenada (BORNES). — Perith. 190-215  $\mu$  venter 110-120  $\approx$  45-54, rostr. 70  $\approx$  22; appendix 50  $\approx$  20-24; recept. 85-105  $\approx$  30-35; long. tot. ad apicem perithecii 330-365  $\mu$ .

- 72. Stigmatomyces Lasiochili Thaxt., Proc. Amer. Acad. 1917, p. 703. 3841 Hab. in artubus etc. Lasiochili pallidi, Grand Etang Grenada. Sporidia 40-45  $\times$  3,5; perith. 135-160  $\times$  30-35; appendix 50-55  $\mu$ ; recept. cum pede 30-35  $\times$  16; long. tot. ad apicem perithecii 175-210  $\mu$ .
- 73. Stigmatomyces fuscipes Speg., Laboulb. Arg. p. 675, fig. 206. 3842 Mediocris, cellulis receptaculi angustis, basali elongata, subbasali brevi, fuscis; androsticho 4-5-mero angusto fusco, ventre paria antheridiorum tria gerente; perithecio subfusoideo-lanceolato fere hyalino (basi excepta subolivascente), apice leniter annulatim constricto atque in ostiolo subcylindraceo-conoideo producto, pedicello brevi latiusculo fumoso fulto.

Hab. in abdomine S c o p a e i lugubris in ins. Santiago La Plata. — Perith. sine ped.  $140-150 \times 28-30$ ; recept.  $60-65 \times 10-17$ ; alt. tot.  $235-260 \mu$ .

- 74. Stigmatomyces Stilici Thaxt., Proc. Amer. Acad. 1915, p. 35. 3843 Hab. in abdomine et elytris Stilici ceylonensis, Peradeniya Ceylon. Perith. 125-195 × 30-40, pes 40-60 × 20-23; appendix 45-50 μ, ejus pes 15-20 μ; long. tot. ad apicem peritheeii 200-310 μ; sporidia 35 × 4.
- 75. Stigmatomyces Coccinellidae Thaxt., Proc. Am. Acad. 1917, p. 704. 3844 Hab. in elytris Coccinelidae minutae speciei, Grenada (Bornes), Mandeville Balaclava, Jamaica, Mindanao Ins. Philipp., Sarawak Borneo.—Sporidia 45 × 3,5; perith. 85-110 × 24-30, apex

22\*20-18\*25; appendix ad apicem term. antheridii 35-40  $\mu$ ; antheridia 18  $\mu$ ; receptac. 20-25\*10-12; long. tot. ad apicem perithecii 120-140  $\mu$ .

- ILYTHEOMYCES Thaxt., Proc. Amer. Acad. 1917, p. 705 (Etym. a Ilythea, genus Dipterorum). Receptaculum compactum, bicellulare, pes et basis non discreta; cellula subbasilaris apice cellulam peduncularem perithecii et lateraliter appendicem gerens. Appendix constans ex axi cellularum superpositarum numero indefinito; antheridia majuscula, binata, colorata; cellulae terminales axis ramulos complicatos extus intusque gerentes; perithecia normalia, basis et pes bene evoluta, apice varie appendiculigera.
- 1. llytheomyces elegans Thaxt., l. c. p. 707.

3845

Hab. in superficie inf. dextera abdominis I l y the a e sp. (Dipt.), Clarkestown et Balaclava Jamaica, Frenada (BRUES) et Panama (RIVER). — Sporidia  $25 \times 2$ ; perithecium  $52.75 \times 16.18$ , ejus appendix  $75.140 \times 4.5$ ; appendix  $50.80 \,\mu$ ; recept.  $10.14 \times 12.14$ ; long. tot. ad apicem perith.  $90.145 \,\mu$ .

2. llytheomyces sarawakensis Thaxter, Proc. Amer. Ac. of Sc. 53., 8846 1918, p. 716. — Ilytheom. eleganti valde affinis et probabiliter varietas ejusdem tantum sistit. — Totus fungus 100-120  $\mu$  long.; peritheciis e basi ascigera 50-75  $\approx$  14-20, sporis circ. 22  $\approx$  2-5, regione basali et pedicellari 20-35  $\approx$  18-22, receptaculo  $10 \approx$  12, appendicibus 50-60  $\mu$  long.

Hab. in inferiori parte abdominis Ilytheae sp., Sarawak Borneo.

3. Ilytheomyces kamerunensis Thaxter, Proc. Amer. Ac. of Sc. 53., 3847 1918, p. 715. — Cellula basali latiuscula, omnino hyalina, quadrangulari, ventricosa, subbasali subtrigona, minori subventricosa et uno cum pede nigricanti; appendicibus numerosis, ramulis crassiusculis, antheridiis binis, crassis, rectis, brunneis; cellula pedicellari perithecii parva et angusta, omnino opaca cum regione basilari abnormiter efformata perithecii longiore; cellula pedicellari secundaria infra nigro-marginata; cellulis inferioribus perithecii extus leniter plicatis, perithecia apice obscuriori indistincto abrupte angustato, 63-70 × 17, sporis 20 × 2,5; regione cellulae basilaris 90-100 × 18-20, cellula pedicellari perithecii 8 × 8, receptaculo 15 μ, appendicibus 56-68, totus fungus 140-175 μ long.

Hab. in inferiori parte abdominis Ilytheae sp., Kamerun Africae occ. — Proxima I. sąrawakensi a qua differt caracteribus

cellulae basilaris, peritheeii etc.

- 4. llytheomyces manubriolatus Thaxt., Proc. Amer. Acad. 1917, p. 708. 3848

  Hab. in alis Ilytheae sp., Grenada, Jamaica, Trinidad, Panama (ROVEE). Sporidia 22 × 2; perith. 40-50 × 13-16, apex 12 μ, appendix ejus 40-60 × 3; processus cell. secund. 8-14 μ; appendix 30, ramuli longiores 45 × 5; recept. et pes 15; long. tot. ad apicem perithecii 75-85 μ.
- 5. Hytheomyces panamensis Thaxt., Proc. Amer. Acad. 1917, p. 710. 3849 Hab. in superf. sup. alae sinistr. Ilytheae spec., Bocas del Toro Panama. Sporidia  $28 \times 2.5$ ; perith.  $36-40 \times 14$ , pars basalis 12-13.5 × 12; appendicis axis 20  $\mu$ , ramuli longiores  $28 \mu$ , antheridia  $12 \times 3.5$ , protrusio e cellula subbasii. receptaculi  $18 \times 7$ ; long. tot. ad apicem perith.  $58-68 \mu$ .
- 6. Hytheomyces minusculus Thaxt., Proc. Amer. Acad. 1917, p. 711.
  Hab. in ala dext. Ilytheae sp., Clarkstown Jamaica. Sporidia 22 × 2; perith. 48-50 × 15, pes 9 × 7,5, pars super. hyal. 18 × 14, processus term. 15 × 5; appendicis axis 30 μ; ramuli longiores 35 μ, antheridia. 12 μ; long. tot. ad apicem perithecii 70-90.
- Ilytheomyces lingulatus Thaxt., Proc. Amer. Acad. 1917, p. 712.
   Hab. in ala dext. Ilytheae sp., Grenada, Jamaica, Trinidad, Panama (ROVER). Sporidia 35 × 3; perith. 35 × 14-17, processus linguiformis 16-18 × 5, pars libera 9-10 μ; appendicis axis ater 25-30 μ, ramuli longiores 35 × 3,5; antheridia 18; long. tot. ad apicem perithecii 55-65 μ.

3851

- 8. llytheomyces major Thaxt., Proc. Amer. Acad. 1917, p. 713. 3852 Hab. in ala sinistra I l y t h e a e , Bocas del Toro Panama. Sporidia 45 × 3; perith. 58 ·68 × 18, processus linguiformis 18 × 8; basis 25 × 10; appendix axis 35 μ, ramuli longiores 55 × 5 ·6; antheridia 12 × 4,5; long. tot. ad apicem perithecii 90-110.
- 9. llytheomyces calycinus Thaxt., Proc. Amer. Acad. 1917, p. 714. 38 Hab. superf. superiori alae sinistrae Ilytheae sp., Battersea et Clarkstown Jamaica. Sporidia 25 × 2,5; perith. 60-68 × 17-20, apex 15-17 × 15-17, pes et basis 18 × 12; appendicis axis 25-35 μ ramulus longior 20 μ; antheridia 14 μ; long. tot. ad apicem perith. 90-110 μ.
- 10. llytheomyces falcatus Thaxter, Proc. Amer. Ac. of Sc., 53., 1918, 3854 p. 714. Plus minus conspicue curvatus. Cellula basali infra insertione appendicum abrupte prominenti, cellula subbasali latiori hyalina; axe appendicum divergens e cellulis 4 vel 5 vix visibilibus extus nigricantibus efformato; cellula subbasali abrupte la-

tiori quam basali interiori parte cellulis androphori gerenti, caeteris cellulis axialibus extus brunneo-nigricantibus extus curvis; cellula pedicellari perithecii hyalina, breviuscula; superficie perithecii brunneo-purpurascenti granuloso-maculata, apice leniter obscuriori; perithecio 55-68  $\approx$  15-18, regione pedicellari et basali 35-50  $\approx$  15, sporis circ. 25  $\approx$  2,5; appendicibus 50  $\mu$  circ. long. ramulis longioribus 40  $\approx$  6,5, totus fungus 100-120  $\mu$  long.

Hab. in superiori parte abdominis Ilytheae sp., Kamerun Africa occ. — Il. majori proxima, sed differt perithecio punctato apice prominenti incurvato.

- 11. llytheomyces obtusus Thaxt., Proc. Amer. Acad. 1917, p. 715. 3855 Hab. ad basim alarum Ilytheae sp., Clarkstown Jamaica.— Sporidia  $30 \times 2.5$ ; perith.  $48 \times 18.20$ ; appendicis axis  $30 \mu$ , ramulus longior 35; cell. subbasil.  $6.7 \mu$ ; long. tot. ad apicem perithecii  $80 \mu$ .
- 12. Ilytheomyces anomalus Thaxt., Proc. Amer. Acad. 1917, p. 716. 3856 Hab. in artu poster. Ilytheae, Clarkstown, Jamaica. Sporidia  $28 \times 2.8$ ; perith.  $50 \times 16 \times 24$ , pes et cell. basil.  $32\text{-}60 \times 13\text{-}17$ ; recept. incl. pede  $28 \,\mu$ , axis appendicis  $50 \,\mu$ ; antheridia  $16 \,\mu$ ; long. tot. ad apicem perith.  $100\text{-}140 \,\mu$ .
- 13. llytheomyces simplex Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3857 p. 718. Perithecium et appendices obscure brunneae. Cellula basali receptaculi pede conjuncta, minuta, aegre perspicua margine superiori hyalino excepto; appendicibus crassis subclavatis, apice ramis brevibus abortivis praeditis, axe e quinque cellulis subinaequalibus efformato; cellula pedicellari perithecii brevi et crassa, hyalina, cellula basali hyalina v. supra brunneo tincta, cellula pedicellari secundaria extus prominula; perithecio obscure brunneo, asymmetrico infra inflato, apice abrupte leniterque angustato, pallidiori, 60 \* 18, sporis 15 \* 2, appendicibus 35 \* 8, totus fungus 90.97 μ long.

Hab. ad crura Ilytheae sp., Sarawak Borneo. — I. anomalo valde affinis sed statura minori et caracteribus appendicum et peritheciorum diversus.

**IERATOMYCES** Thaxt. — Syll. XI p. 454, XIV p. 735, XVI p. 690, XXI p. 4 et 12.

Teratomyces atropurpureus R. Maire, Bull. Soc. Hist. Nat. Afrique 3858 du Nord, t. 11., 1920, Extr. p. 20, tab. II fig. 13-17. — Receptaculo tricellulari; cellula basali supra unguem nigrum subhyalina;

cellula subbasali, obconica, apice nigricanti; cellula distali latissima, obconica, inferne nigricanti, superne subhyalina v. dilute fusco-purpurea; septo superiore intense fusco-purpureo, cellularum appendiciferarum coronam et perithecii pedicellum gerenti; appendicibus masculis eis T. Actobii simillimis, sed usque ad apicem fusco-purpureo-septatis, adultis dilute fusco-purpureis. Peritheciis dilute fusco-purpureis, elongato-subfasiformibus, symmetricis, apice rotundatis; ostioli regulares labiis subhyalinis vix prominulis; perithecii pedicello subhyalino, unicellulari, subcylindrico, appendicibus breviore, perithecio subaequilato; cellulis basalibus 3, fusco-purpureis; cellulis ascogenicis 2. Ascis 4-sporis Ascosporis basi apiculo uncato, apice calyptra gelatinosa praeditis, 1-septatis, loculo superiore majore. — Totus fungus 215-220 µ alt.

Hab. in Actobio signaticorni in Mauretania, Africa boreale.

- STEPHANOMYCES Speg., Lab. Arg. (1917) p. 671.— Laboulbeniineus, peyritschiellaceus, monoicus; receptaculo hippocrepice coroni-v. flabelli-formi, e cellula basali nigro-unguiculata majuscula suborbiculari, pluribus subbasalibus radiantibus subimbricatis composito; cellulis marginalibus utrinque praeextimis androsticho psalliato trimero appendiculato ornatis, ceteris paraphysibus filiformibus dimeris saepius apice minute psalliato donatis; perithecio e cellula centrali e latere psalliato-cornuta exsurgente, pedicellato ovato laevi; nucleo ascogenico solitario; ascis bisporis; sporis hyalinis geminatis acicularibus obsolete excentriceque 1-septatis; antheridiis solitariis parvis ad apicem androstichi insidentibus inter paraphyses et eaurum basi adnatis.
- 1. Stephanomyces elegantissimus Speg., l. c. p. 671, fig. 203. Parvus, 3859 totus plus minusve infuscatus, perithecio obliquo fere ovato-dimidiato, pedicello recto nigro opaco subaequilongo fulto, cornu basilari pedicelli, paraphysibus extimis sterilibus nec non androstichis basi grosse nigro psalliatis; receptaculo primo conchoideo-contracto, dein flabellato-expanso, cellulis subbasalibus circiter 15 marginalibus, extimis majoribus difformibus nigris opacis.

Hab. in toto corpore Typhaeae fumatae, La Plata. — Perith. sine ped.  $45.50 \times 25.26$ ; recept.  $35 \times 40$ ; alt. tot.  $100.120 \mu$ .

TRENOMYCES Chatt. et Pic. - Syll. XXII p. 17.

1. Trenomyces australis Speg., Laboulb. Arg. p. 679, fig. 211. — Ma- 3860

sculi et foeminei saepius dense commixti coacervatique, substratum ambitu nigrificantes, utriusque appendice receptaculari pucciniiformi pallide olivascente crasse tunicata cellula apicali conoideo-submucronata; peritheciis angustis sursum vix incrassatis, apice breviter conoideis, ostiolo truncato trilobulato deorsum in pedicello non v. vix angristiore parum elongato obsolete limitato, productis.

Hab. in thorace Menopi sp. (pediculi) in Phalerocorace imperiali (avi), La Plata — app.  $28-30 \times 15$ ; anther.  $40 \times 11$  (mas); app.  $25-28 \times 15$ ; perith. sine ped.  $128-150 \times 20$  (fem.).

2. Trenomyces platensis Speg., Laboulb. Arg. p. 680, fig. 213 — Apen-3861 dices subparvae, vix chlorinae, cellula supera conoidea acuta; antheridia pauca ventricosa; perithecia parum numerosa majuscula elongata, primo recta dein arcuato-diflexa, parte ascophora subfusoidea apice conica, ostiolo trucato trilobulato donata, stipite parum breviore conspicue angustiore fulta.

Hab. frequens in toto corpore Docophori sp. (pediculi) in Aramo scolopaceo (avi), Punta Lara, La Plata Arg.—App.  $10 \times 6.7$ ; anther.  $28.30 \times 12.13$  (mas); app.  $18.20 \times 10.12$ ; perith. sine ped.  $175.180 \times 25.30$ ; perith. ped.  $125.150 \times 10.15$  (fem.)

3. Trenomyces Lipeuri Thaxt., Proc. Amer. Acad. 1912, p. 383. — Mas: 3862 Appendicibus horizontalibus, cellula extima quam basilari duplo longiore; longit. ab apice appendicis ad ultimam corticatam 42 μ; appendice 15 × 9; antheridio 35 μ longo, incluso pede; tubis efferentibus 4 μ long., cetero corpore 18 × 20 — Femina: perithecio 90-110, incluso pede; corpore 60-80 × 20-28; rhizoide 90-100 μ long., tenuiore 7 μ cr.

Hab. in partibus variis Lipeuri sp., ad « Buzzard », Guatemala, Lipeuri celeris in California.

4. Trenomyces Lacmobothrii Thaxt., Proc. Amer. Acad. 1912, p. 384.— 3863 Mas: Cellula basilari 18 × 18; appendice 28 × 18; antheridiis 45.50 μ long. incluso pede; corpore 25 × 12, incluso tubo efferenti — Femina: appendice latiuscula, cellulis subaequalibus; peritheciis, incluso pedicello, 140-160 × 20-25; appendice 30 × 20.

Hab. in insecto Lacmobothrio atro, ad Cost' New England. — Appendix latior Pucciniam fere aemulatur.

5. Trenomyces gibbus Thaxt., Proc. Amer. Acad. 1912, p. 386. — Mas 3864 ignotus.—Femina: Tr. histophoro similis; perithecio 300  $\mu$  long. incluso pede (20  $\mu$  longo) gibbo, apice supra geniculum 32  $\mu$  longo, basi 28-30  $\mu$  cr., apice 7  $\mu$  lat.; appendice 25  $\times$  10.

Hab. in Lipeuri longipili (exempl. unicum), California.

- ZEUGANDROMYCES Thaxt., Proc. Amer. Acad. 1912, p. 177. Receptaculum ex cellulis binis constans, superior perithecium et antheridia gerens; appendices e cellula pedunc et serie superpositarum cellularum, quarum ima basilari a ceteris discreta vel non, ex cuius latere interiore series binae antheridiorum conjugatorum oriuntur; perithecium vulgo solitarium, cellula pendunc. bene evoluta suffultum; trichogynum e basi partis liberae trichophori.
- 1. Zeugandromyces australis Thaxt., Proc. Amer. Acad. 1912, p. 178. 3865 Hab. in corpore S c o p a c i l e v i s , Palermo Argent. Perith. 155 × 40; cellula pedunc. 16 × 27; appendix incl. cellula ped. 44-54  $\mu$ ; antheri lia 20  $\mu$ ; long. tot. ad apic. appendicis 90  $\mu$ , ad apicem perithecii 250  $\mu$ .

CORETHROMYCES Thaxt. — Syll. XI p. 449, XIV p. 729, XVI p. 681, XVII p. 917.

- Corethromyces appendiculatus Thaxt., Proc. Amer. Acad. 1915, p. 41. 3866
   Hab. in elytris insecti Anaspidis affinis specici, Samarang
   Java. Perith. 50-60 × 16, pes 8-10 × 5, pars libera appendicis terminalis 6 × 2, appendix primaria axis 28-45 × 7, rami hyalini 28 μ,
   long. tot. ad apicem perithecii 70-85 μ; receptaculum 10 × 5.
- 2. Corethromyces? andicola Speg., Lab. Arg. p. 487, fig. 29. Me-3867 diocris, totus hyalinus; cellula basali conoidea, subbasali subbulbiformi subcuboidea septo obliquo in segmentis duobus triangularibus oppositis divisa, cellulis duobus connatis collum breve angustius efformantibus coronata; cellula ventrali colli anguste lineari pedicellifera, dorsali subcuboidea appendicifera; perithecio sublanceolato non v. vix inaequilaterali, in pedicello elongato, deorsum sensim attenuato, producto; appendice androstichali elongata sursum leniter incrassata subfusoidea 12-15-mera, paraphysibus omnino destituta.

Hab. in elytris C hiliotis for mosae, Nahuel-Huapi, Neuquén, ex Museo Platens. Argent. — Perith.  $55-62 \times 19-22$ , pedic.  $60-65 \times 7-15$ ; append.  $175-200 \times 10-15$ .

3. Corethromyces Silphidarum Thaxter, Proc. Amer. Ac. of Sc. 54., 3868 1918, p. 217. — Undique et uniformiter sordide flavidum. Peritheciis 50.65 × 15; sporis circ. 20 × 2; appendicibus 50.60 μ cum cellula basilari circ. 10 × 7; receptaculo 18-20 × 16-18, cellula pedicellari perithecia inclusa; totus fungus 85-100 μ long.

Hab. ad elytras Cholevae sp., Corral Chile, America austr.— Proxima C. bidentato et C. curvato sed differt forma et habitu erecto perithecii, cellula subbasali et cellula pedicellari perithecii magis elongata.

4. Corethromyces curvatus Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 3869 p. 218. — Color uniformiter pallide flavum; aspectu brevi obtuso, hinc inde fortiter incurvatus Peritheciis 50 60 × 20-22; sporis circ. 24 × 2,5; appendicibus e apice ramulorum 75-100 μ; ramulis longioribus 50-60 μ; cellula basilari et pedicellari 35 × 38; totus fungus e apice perithecii 75-95 μ long.

Hab. in Cholevae sp., Aukland Nova Zelandia (EAMES et SINNOTT). — C. Silphidarum et C. bidentato magis affinis sed differt conformatione perithecii et appendicum etc.

5. Corethromyces bidentatus Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 3870 p. 219. — Uniformiter pallide flavum, varie incurvatum. Peritheciis  $52 \times 15$ ; sporis circ.  $20 \times 2.5$ ; appendicibus e apice ramulorum 55-65. Totus fungus 60-70  $\mu$  long.

Hab. ad elytras C holevae sp., Aukland Nova Zelandia (EA-MES et SINNOTT). — C. Silphidarum affinis a qua mox dignoscitur emergentiis lateralibus duobus dentiformibus e apice productis.

6. Corethromyces bicolor Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 3871 p. 220. — Perithecio in regione ventrali olivaceo nigricanti, sed parte distali distincte et abrupte hyalina; receptaculo angustato elongato obconico, opaco bilobo. Perithecio 50 × 16, receptaculo ab apice lobi longioris, pede incluso, 70-85 μ; totus fungus 110-124 μ long., 20-24 μ latus.

Hab. in pedibus et abdomine Cholevae sp., Aukland Nova Zelandia (EAMES et SINNOTT).

7. Corethromyces argentinus Thaxt.; Proc. Amer. Acad. 1912, p. 181; 3872 Speg. Lab. Arg. fig. 30.

Hab. in artubus et abdomine Cryptobii sp., Palermo Argent. et Cryptobii agilis, Santiago. — Perith. 160-290 × 40-55; pars ascigera 165-170  $\mu$ , cellula ped. 40-60 × 20-30; sporidia 40 × 3,5; axis primar. appendicum 50  $\mu$ ; long. tot. ad apices append. longior. 370  $\mu$ ; ramuli crassiores 8  $\mu$ ; recept. 40 × 8.

8. Corethromyces? subsigmoideus Speg., Lab. Arg. p. 505, fig. 44. — 3873 Parvus, pallide stramineus; cellula basali parva obconica subbasali majore rotundata ventre prominula; androsticho erecto brevi 4-5-mero, articulis cito decrescentibus saepius appendiculis brevissimis tenuibusque ornatis; perithecio lanceolato-naviculari, apice obtuso, dorso superne praecipue grosse parceque fusco-verrucoso, basi cellulis 2 segmentiformibus donato, abrupte in pedicello subae-

quilongo arcuatulo producto.

Hab. in parte inf. abdominis Eurhexii Putzeyssi, La Plata, Arg. — Perith. 75-85 × 30 (sine ped.), ped. 60-65 × 15.

9. Corethromyces formicetorum Speg., Lab. Arg. p. 490, fig. 32. — Mediocris fere hyalinus rectus, cellula basali hyalina ungue minuto donata obconica, subbasali lenissime fumosa latitudine duplo breviore, androsticho fumoso catenula cellulari 4-5-mera paraphysifera ornato, gynosticho etiam fumoso brevi connato, perithecio hyalino elongato sublageniformi coronato.

Hab. in thorace et coxis H eterotopis formice torum, Santa Catalina B. A., Argent. — Alt. tot. 225-250  $\mu$ ; perith. 145-155  $\approx$  40.

- 10. Corethromyces rostratus Thaxt., Proc. Amer. Acad. 1912, p. 191. 3875 Hab. in partibus variis, praecipue abdomine H e t e r o t h o p i s sp., Temperley et Llavallol Argent. Perithecia, excl. cellula basil., 120-135 × 20-22, cell. basil. 8 × 6; receptac. 55-58 μ, sporidia 30 × 3; appendix 95-100 × 12-14, rami longiores 155 μ; long. tot. ad apicem perithecii 200-230.
- 11. Corethromyces macropus Thaxt., Proc. Amer. Acad. 1912, p. 190. 3876
   Hab. in corpore insecti Heterothopis, Llavallol Argentina—Perithec. cum pede 55 × 8; appendix 50-55 × 8-10; long. tot.
   ad apicem perith. 150-180; sporidia 30 μ l.
- 12. Corethromyces platensis Thaxt., Proc. Amer. Acad. 1912, p. 183. 3877 Hab. in corpore Lathrobii nitidi, Palermo, Temperley, Llavallol Argent. Perith. cum basi  $118-125 \times 34\cdot 40$ ; pars sporif. 75-100  $\mu$ ; cellula pedunc.  $40-60 \times 12-20$ ; sporidia  $24 \times 2.5$ ; longit. total. append. longior.  $150-360 \, \mu$ ; recept. incl. pede  $40 \times 20$ ; long. tot. ad apicem perithecii 85-235  $\mu$ —var. gracilis Thaxt., l. c., Speg. Lab. Arg. p. 491 fig. 33 (ut spec.), differens perithecio et cellula pedunc. longioribus et angustioribus.—Hab. in Stereocephalo seriatipenni et Lathrobio dimidiato et nitido, La Plata.
- 13. Corethromyces Medonis Thaxt., Proc. Amer. Acad. 1915, p. 38.
  Hab. in abdomine infer. Medonis curti, Samarang Java et Medonis Birmani, Borneo—Perithecium 78-100 × 20-28;
  pes 20-39 × 12-16; appendix primaria 27-31 × 9, ramuli longiores 50 μ; long. tot. ad apicem perithecii 125-175 μ.
- 14. Corethromyces decipiens Thaxt., Proc. Amer. Acad. 1915, p. 38.

  Hab. in abdomine Medonis birmani et Med. ochracei, Borneo et Med. curti, Samarang, Java. Perith. 75-100

 $\approx 16$ ; pes 12  $\approx 8$ ; receptac. cum pede 25-30  $\mu,$  processus calcariformis 35-40  $\mu,$  appendix incl. ramis 55-65  $\mu,$  long. tot. ad apicem perith. 120-150  $\mu.$ 

Corethromyces Ophitis Thaxt., Proc. Amer. Acad., 1912, p. 182; Speg. 3880
 Lab. Arg. fig. 34.

Hab. in insecto O p h i t e F a u v e l i i, Palermo Argent. (J. Brethes), La Plata (Speg.).—Perithecia 175  $\approx$  28, inclusa basi 20  $\mu$ ; appendices 70, ad apices ramorum 170  $\mu$ ; receptac. cum pede 50  $\mu$ ; long. tot. ad apicem perith. 275  $\mu$ .

16. Corethromyces pulchellus Speg., Lab. Arg. p. 495, fig. 37. — Sub- 3881 majusculus; cellula basali subhyalina, subbasali nigra opaca sursum per androstichum in calcare atro opaco producta; perithecio cylindraceo-elliptico utrinque leniter angustato, apice rotundato-ostiolato, deorsum in pedicello valde graciliore pluries breviore attenuato; appendice e cellula tertia supera subcultriformi androstichi exsurgente, articulis obconicis subfumosis alterne sympodicis, filamentis tenuibus hyalinis coronatis efformata.

Hab. in toto corpore Pinophili Bergi, in ins. Santiago, La Plata Arg. — Alt. tot. 190-210  $\mu$ ; perith. 125-130  $\approx$  30-32 (sine pedic.).

17. Corethromyces rhinoceralis Thaxt., Proc. Amer. Acad. 1912, p. 189, 3882 Speg. Lab. Arg. fig. 38.

Hab. in superficie inf. abdominis Pinophili suffusi, Llavallol et Sta Catalina Argent. (SPEG.). — Sporidia intra perith.  $45 \times 6$ ; perithecium, inclusa basi,  $240\cdot 250 \times 46$ ; spina subterminalis 86-90  $\times$  8-10, cellula pedunc.  $60 \times 15$ ; receptaculum cum pede 70  $\mu$ ; appendicis pars libera 135  $\mu$ .

18. Corethromyces valdivianus Thaxter, Proc. Amer. Ac. of Sc. 54., 3883 1918, p. 220. — Regione cellulae pedicellaris perithecii ventricosoinflata, colore opaco ad apicem axis appendicum suffuso. Perithecio 120-140  $\approx$  20-22 cellula basali inclusa; sporis  $45 \approx 3.5$ ; receptaculo e apice axis appendicum  $100\text{-}120~\mu$ ; in regione ventricoso-inflata 28-32  $\mu$  latus; totus fungus ad apicem perithecii  $190\text{-}225~\mu$ .

Hab. in apice abdominis Quedii, Corral Chile America austr.

19. Corethromyces Scopaei Thart, Proc. Amer. Acad., 1912, p. 184.
Hab. in abdomine super. Scopaei fratris, Palermo Argent. — Perith. 65-75 μ; pars ascigera 55-70; cellula ped. 28 × 12; receptacul. 20 × 16; longit. total. ad apicem perith. 95-120; sporidia 18 × 2.

20. Corethromyces scydmaenicola Speg., Lab. Arg. p. 497, fig. 41.

3885

3884

Parvulus, totus hyalinus; receptaculo brevinsculo crassiusculo, cellula basali obconica, subbasali trigona; androsticho, cellula globosa imposito, erecto simplice 5-6-mero, antheridia nonnulla breviter pedicellata ferente; perithecio late rhomboideo elliptico, deorsum breviter pedicellato, ostiolo minuto subbilabiato apice hiante.

Hab. in elytris Scydmaenidei cujusdam crassi, in nidis Attae Lundi viventis, La Plata Argent. - Alt. tot. 135-160; perith  $85-90 \times 50$  (sine pede).

- 21. Corethromyces orientalis Thaxt., Proc. Amer. Acad. 1915, p. 40. Hab. in abdomine et prothorace Stilici Ceylonensis, Buitenzorg (THOMPSON), Samarang, Java. - Perith. 66 \* 16, pes  $40.45 \times 13$ ; append. primaria 25  $\mu$ , ramis longiores 250-275  $\mu$ ; recept. 28, pars libera processus 24 × 4; long. tot. ad apicem perithecii 135-145 µ.
- 22. Corethromyces pallidus Speg., Lab. Argent. p. 493, fig. 35. Me- 3887 diocris, pallidus, cellulis prima et secunda hyalinis, appendice 6-7 mera subsimplice sursum tenuiter ramulosa, achroa ejusdem cellula infima excepta infuscata et sequente ramulum antheridiferum proferente saepius fumoso, perithecio elongato elliptico pallide melleo laevi v. subtoruloso cellulis basilaribus eximic perspicuis, pedicello subcylindrico hyalino suffulto ostiolo obtuso coronato.

Hab. in ore et artubus Stere o cephali seriatipennis, La Plata Arg.—Alt. tot. 140-160; perith. 75-90 × 20-25 (sine ped.).

23. Corethromyces Stilici Thaxt., Syll. XVI p. 681. - C. pygiphilus 3888 Speg., Lab. Arg. p. 498 fig. 42 a. - Mediocris, receptaculo fere toto nigro calcare androstichi eximie evoluto subclavulato atque subarcuato plus minusve incurvato obscure melleo, pedicello obclavato hyalino breviore v. longiore fulto.

Hab. frequens et abundans in abdomine Stilici elegantis, Monte Video et Sta Catalina, B. A., La Plata. — Alt. tot. 150-175; perith.  $60-85 \approx 25-30$  (sine ped.).

24. Corethromyces rectus Speg., l. c. p. 499 fig. 42 b. - Majusculus, 3889 totus melleus, erectus, rectus, perithecio elliptico-conoideo v. ovato exappendiculato, cellulis basilaribus indistinctis, cellula pedicellari praelonga recta crassa, receptaculo parvo parce nigrefacto, calcare nigro brevi v. brevissimo, appendice crassa breviuscula pallida v. subhyalina.

Hab. in abdomine Stilici elegantis, Sta Catalina B. A. et La Plata, Arg. — Alt. tot. 250-275  $\mu$ ; perith. 79-85  $\approx$  22-28 (sine ped.).

25. Corethromyces verrucifer Speg., l. c. p. 502, fig. 42 f. — C. longi- 3890 cauli Thaxt. peraffinis, ostiolo perithecii e latere ventrali verruca difformi sat prominula distincto, calcare cellulae basalis rudimentario.

Hab. in thorace Stilici elegantis, Sta Catalina B. A., Argent. — Alt. tot. 150-200; perith. 55-65 \* 20-22 (sine ped.).

26. Corethromyces stilicicola Thaxt. — Syll. XVII p. 917 (Stichomyces) — 3891

\* C. podophilus Speg., l. c. p. 504, fig. 43-b. — C. stilicicolae Thaxtpersimilis sed totus plus minusve melleus; receptaculo androsticho
gynostichoque summopere ludentibus non divaricatis, perithecio
sublanceolato exappendiculato, cellula basali receptaculi calcare
plane destituto.

Hab. in femore Stilici elegantis, Sta Catalina et La Plata, Arg. — Alt. tot. 135-150; perith. 75-80 \* 25 (sine ped.).

27. \* C. sternalis Speg., l. c. p. 504, fig. 43 c. — Praecedentibus valde 3892 affinis ob receptaculum non nigrifactum nec calcaratum sed ab utroque eximie distinctus pedicello peritheciali incrassato obelavatoque nec non cellula apicali appendicis longe tenuiterque comosa.

Hab. in artubus Stilici elegantis, Sta Catalina B. A., Argent. — Alt. tot. 100-125  $\mu$ , perith. 55-75 \* 18-25 (sine ped.).

28. Corethromyces sigmoideus Thaxt., Proc. Amer. Acad. 1912, p. 187. 3893 Hab. in margine super. dextero prothoracis Stilici elegantis, Llavallol, Argent. — Perith. 70-85 \* 23-27; cellula pedunc. 60 \* 18; recept. incluso pede 40 μ l.; longit. total. ad apicem perithecii 135-170; sporidia 26 \* 3.

29. Corethromyces uneiger Thaxt., Proc. Amer. Acad. 1912, p. 188, 3894
Speg. Lab. Arg. fig. 42 g.

Hab. in artubus posterioribus Stilici elegantis, Llavallol, et La Plata Argent. — Sporidia  $26 \times 2.8$ ; perith.  $70\text{-}85 \times 20\text{-}26$ ; cellula pedunc.  $50\text{-}125 \times 15$ ; appendices longiores  $75 \,\mu$ ; recept. incl. pede 30-40, ejus processus  $30\text{-}60 \,\mu$ ; tot. longitudo ad apicem perithecii  $150\text{-}250 \,\mu$ .

30. Corethromyces pygmaeus Thaxt., Proc. Amer. Acad. 1912, p. 186, 3895 Speg. Lab. Arg. fig. 42 d.

Hab. in capite et labio S tilici sp., Palermo et La Plata Argent. — Perith. 70-85  $\times$  23-27; cellula pedunc. 60-18; receptac. cum pede 40  $\mu$ ; longit. tot. ad apicem perithecii 135-170  $\mu$ ; sporidia  $26 \times 3$ .

31. Corethromyces brunneolus Thaxt., Proc. Am. Acad. 1912 p. 185. 3896 Hab. in elytra Stilici sp., Temperley Argent. — Sporidia 22

- $\approx 2.5$ ; perith. 58-62  $\approx 20$ , pars ascigera 54-58  $\mu$ ; cellula pedunc. 23-30  $\approx 12$ ; receptac. 24  $\approx 16$  cum pede; appendix incl. ramis 100, cellula basilaris 20  $\approx 16$ .
- 32. Corethromyces armatus Thaxt., Proc. Amer. Acad. 1912, p. 188. 3897 Hab. in superficie super. prothoracis Stilici sp., Palermo et Temperley, Tucuman Argent. Sporidia 32 × 3; perith. 60-70 × 20-23, ejus processus terminalis margine sup. 28 μ., infer. 40 μ cellula pedunc. 30-45 × 12-18; receptac. 30 × 10; appendix longior 175; tot. longitudo ad apicem perithecii 120-150 μ.
- 33. Corethromyces thinocarinus Thaxt., Proc. Amer. Acad. 1915, p. 39. 3898 Hab. in superf. inf. abdominis Thinocaris pygmaeae, Samarang Java.— Perith. 55-72 × 12-13; appendix cum ramis 35-50; recept. 9 × 7; processus spiniformis 18-55 × 3; long. tot. ad apicem perithecii 75-95 μ.
- 34. Corethromyces Xantholini Speg., Laboulb. Argent. in Anal. Mus. 3899
  Nac. Buenos Aires XXIII p. 183 (1912) c. ic. Totus fuscus 250300 μ altus; paraphysibus saepius ternis, torulosis, extrorsum appendiculatis, plus minusve nigrescentibus; peritheciis pallidis vel fumosis, ex elliptico subcylindraceis, 120 × 30, longe pedicellatis.

  Hab. in X an tholino subtile, La Plata, Argentina. —
  Affinis C. Crytobii Thaxt. et C. jacobini Thaxt., a quibus facile distinguitur ob perithecium pedicellatum et paraphyses atratas.

## STICHOMYCES Thaxt. - Syll. XVI p. 692, XVII p. 917.

- Stichomyces Catalinae Thaxt., Proc. Amer. Acad. 1912, p. 192. 3900
   Hab. in corpore Conosomatis testacei, Llavallol, Argent. Perith. 50-60 \* 15-20; recept. incluso pede 30-55 \* 9-12; appendicis axis 30-35 \* 12; long. tot. ad apicem ramulorum longiorum 75 μ; long. tot. ad apicem perith. 90-125 μ.
- 2. Stichomyces Cybocephali Thaxt., Proc. Amer. Acad. 1915, p. 42. 3901

  Hab. in elytris Cybocephali sp., Peradeniya Ceylon.—

  Perithec. 30-35 × 7-8; sporidia 25 × 2; axis 20-27 × 7; ramuli 15-18; pes 12 × 5,5.
- 3. Stichomyces Pterogenii Thaxt., Proc. Amer. Acad. 1915, p. 42. 3902 Hab. in elytris Pterogeni Nictneri, Peradeniya, Ceylon. — Perith. 40-50  $\approx$  9-10; sporidis 18-20  $\approx$  2, intra perith.; axis primarius 30-35  $\approx$  10-12; ramuli longiores 175  $\mu$ .

## RHIZOMYCES Thaxt. - Syll. XIV p. 730, XVI p. 680.

1. Rhizomyces circinalis Thaxter, Proc. Amer. Ac. of Sc., 53., 1918, 3903

p. 709. — Cellula basali infra constricta et in matrice apparatum rhizoideum efformanti, subbasali parum longiori quam latiori, flavobrunnescentibus; axe appendicum usque triginta cellulis efformato, interne curvatis, apicem versus circinnatis v. helicoideis, cellula basali obscure rubro-brunnea caeteris pallide flavescentibus et brunneo tinctis; perithecio spinuloso  $150 \times 58$ , cellula pedicellari  $508 \times 28$ ; sporis parvis et numerosis  $15 \times 2$ ; receptaculo  $35 \times 28$ , appendicibus circ.  $275-350~\mu$  long. axe  $12~\mu$  cr. ramis latioribus circ.  $50~\mu$ ; totus fungus  $690~\mu$  long.

Hab in abdomine Diopsidis sp. (Dipt.), Gambia River, Africa occ. (Wolbach). — Rh. ctenophoro proxima species sed caracteribus appendicum et perithecii praedistincta.

2. Rhizomyces confusus Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 8904 p. 710. — Syn. Rhiz. crispatus Thaxter p. p., Mem. Amer. Ac. Arts and Sc. vol. XIII n. 6, p. 323, tab. LII fig. 19, 21. — Cellula subbasali receptaculi processu dentiformi obtuso ultra cellulam peduncularem perithecii protrundenti; axe perithecii cum receptaculo angulum notabile efformanti; appendicibus longis divergentibus, ramulis brevibus numerosis; perithecio uniformiter flavido-brunneo, extus incurvato, apice obtuso, lato, caeterum normali.

Hab. in Diopside sp. [Dipt.], Kamerun, Port Natal Africae trop. — A Rh. crispati caracteribus appendicum, perithecii, receptaculi etc. diversa.

3. Rhizomyces cornutus Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3905 p. 711. — Receptaculo flavido; cellula basali subhemisphaerica in matrice processu rhizoideo efformanti; appendicibus erectis v. leniter divergentibus, axe ex duodecim cellulis constante, basali parva subopaca caeteris flavescentibus et brunneo tinctis, apice quatnor v quinque ramulis curvis simplicibus brevibus obtusis, flavido-brunneis praeditis; cellula pedicellari elongata, valida subuniformi; regione basilari perithecii nitide succineo-brunnea et cum perithecio concolori extus leniter curvula, 135-140 × 35-40, cellula pedicellari 280-350 × 22, appendicibus 185-195, axe ramorum 18 μ, ramulis 18 μ; totus fungus 400-525 μ long.

Hab. in inferiori parte abdominis Diopsidi sp. (Dipt.), Kamerun, Africa occ.— Proxima R. circinalis et gibbosi sed caracteribus appendicum et perithecii diversa.

Rhizomyces gracilis Thaxter, Proc. Amer. Ac. of Sc., 53., 1918, 3906
 p. 712. — Erectus longus et gracilis; pede normali; cellula basali receptaculi magis lata quam longa; oblique prominenti, subbasali

longiore quam latiore axe divergenti utrinque leniter constricto; appendicibus ex 17 cellulis efformatis hyalinis erectis apicem perithecii vix excedentibus, cellula basilari parva et subtriangulari, ramis ex 5-6 ramulis hyalinis efformatis; cellula pedicellari perithecii brevi, hyalina erecta; perithecio concolori 60 × 22 cum regione basali 88  $\mu$  long.; cellula pedicellari 284 × 15; receptaculo circ. 25 × 14; appendicibus 350  $\mu$  long., ramulis lateralibus circ. 50  $\mu$ ; totus fungus 355  $\mu$  long.

Hab. in Diopsidis sp. [Dipt.], Killimandjaro Africa or. — Rh. confuso proximus sed differt caracteribus appendicum.

5. Rhizomyces kamerunus Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 3907 p. 713. — Cellulis receptaculi subaequalibus vix longioribus quam crassioribus, subbasali obscuriori; appendicibus suberectis v. plerumque circa perithecium incurvatis, axe ex 10-20 cellulis efformato, infra obscurioribus subopacis; ramulis nonnullis clavatis, nigricantibus, apice subhyalinis, ramulis 2-5 curvulis apicem versus extusque sitis gerentibus, nigricantibus apice incrassatis subhyalinis; cellula pedicellari perithecii basi plerumque incurvata et tunc perithecio parum divergenti; peritheciis 75-80 × 25, cellula pedicellari 35-50 × 11, sporis circ. 22 × 2,5, appendicibus 175 μ, ramis 70-100, receptaculo circ. 22 × 8, totus fungus 140-160 μ.

Hab. ad crura antheriora Diopsidis sp. [Dipt.], Kamerun. Africa occ. — Rh. confuso proxima sed caracteribus ramulorum, perithecii etc. diversa.

SPHALEROMYCES Thaxt. — Syll. XI p. 453, XIV p. 736, XVI p. 692.

1. Sphaleromyces Bruchi Speg., Laboulb. Argent. in Anal. Mus. Nac. 3908 Buenos Aires XXIII p. 195 (1912), fig. 23. — Parvulus, 190-200 μ altus, fuscus, calcare nigro 50-60 × 15-13 armatus; appendicibus sterilibus axillaribus paucis brevibus fumosis; perithecio subfusoideo, 100-120 × 25-28, fusco-fumoso, longitrorsum valvatim dehiscente, ostiolo minute bidentato.

Hab. in Lema D'Orbignyi et L. Dejani, minas Geraes, Brasilia.

2. Sphaleromyces andinus Speg., Lab. Arg. p. 670, fig. 202. — Medio-3909 cris, receptaculo elongato-obconoideo nigerrimo opaco, perithecio melleo sub ostiolo nigricante e cylindraceo subfusoideo, apice abrupte subtruncato-bilabiato, labiis rotundatis inter labia minute appendiculata.

Hab. in abdomine Philonthi impressifrontis, Na-

huel-Huapi, And.: Argent.—Perith. sine pede 75-85  $\times$  23-25; alt. tot. 175-200  $\mu.$ 

3. Sphaleromyces speluncalis Maire, Bull. Soc. Hist. Nat. Afrique du 3910 Nord, t. VII, 1916, p 18, tab. II, fig. 23-29. — Minor, 140-155 μ long. tot., dilute rufo-brunneus, pellucidus tenuiter tunicatus, stigmatiferus. Receptaculo 40-50 μ longo, bicellulari; cellulae basales obconicae, 30-40 × 15-21, pede atro et parte inferiore supra pedem macula subatra notata; cellulae subbasalis pentagonae septo inferiore transversali. Appendice masculo pede unicellulari nec non 4-6 cellularum oblique septatarum serie formato, seriei cellulis ramos hyalinos, septatos, tenuissime tunicatos (antheridiferos?) mox collabescentes gerentibus. Perithecii pede a cellulis basalibus vix distincto. Perithecio ellipsoideo-oblongo 80-85 × 26-28, pellucido, apice cornubus brevibus, 2 hyalinis et tertio atrato. praedito. Ascosporis ad ½-4-½ inferiorem uniseptatis, aciculari-subfusiformibus, hyalinis, laevibus, 32-36 × 2-2,5, strato mucoso obvolutis.

Hab. in abdomine Heterothopis nigrae, Tlemeen Algeria Africae bor. (P. DE PEYERIMHOFF).

## CERAIOMYCES Thaxt. - Syll. XVI p. 682, XVII p. 918.

- Ceraiomyces minusculus Thaxt., Laboulb. on Chrysom. 1914, p. 47. 3911
   Hab. in antennis Chietochem a e nanae, Balaclava,
   Jamaica. Perith. 70 × 26; cellulae I-II 18 × 21, cell. III 30-32 × 4;
   appendix inclusis antheridiis 22; long. total. ad apicem perithecii
   90-95 μ.
- 2. Ceraiomyces dislocatus Thaxt., Laboulb. on Chrysom., 1914, p. 47. 3912 Hab. in superf. inf. abdominis C h a e t o c n e m a e m i n ut a e, Trinidad. Perith. 80-90 × 35; cellula I 50-85 × 15; cellula II 17 × 18, cellula III 24-28 × 7; appendix ad apicem antheridii 25 μ; longit. tot. ad apicem perithecii 125-175.
- 3. Ceraiomyces Chaetoenemae Thaxt., Laboulb. on Chrysom., 1914, 3913 pag. 49.

Hab. in elytris C hae to c nemae sp., Amazonia, C haeto c n. minutae et E pitrichis lucidae et E. convexae, Port of Spain, Trinidad. — Perith. 60-116  $\times$  38-42; sporidia  $52 \times 4$ ; cell. I-II  $60-122 \times 22-25$ ; cell. III  $38-42 \times 8-10$ ; appendix  $30 \mu$ ; long. toc. ad apicem perithecii  $160-250 \mu$ .

4. Ceraiomyces Epitrichis Thaxt., Laboulb. on Crysomel. 1914, p. 45. 3914

Hab in elytris E p i t r i c h i s c o n v e x a e, Port of Spain,

Trinidad.—Perith. 50-70 \* 16; appendix, inclusis antheridiis, 30-32 #;

cellula III 28 × 7; long. totalis ad apicem perithecii 140-160 µ.

- 5. Ceraiomyces obesus Thaxt., Laboulb. on Chrysom., 1914, p. 46. 3915 Hab. prope basim artuum anter. Epitrichis convexae, Port of Spain, Trinidad. — Perith. 106-112 × 52-60; append. incl. antheridiis 18 μ; receptac. cellulae I-II 52 × 18, cell. III 36 × 10, long. tot. ad apicem perithecii 140-160 μ.
- 6. Ceraiomyces trinidadensis Thaxt., Laboulb. on Crysom., 1914, p. 48. 3916
  Hab. in artubus E p i t r i c h i s c o n v e x a e, Port of Spain,
  Trinidad. Perith. 80-88 × 28; cellula I 28-35 × 18; cellula II 18 μ,
  cell. III 28 × 10; appendix, inclusis antheridiis, 35; long. tot. ad
  apicem perithecii 125 μ.
- 7. Ceraiomyces Nisotrae Thaxt., Laboulb. on Chrysom., 1914, p. 49. 3917 Hab. in elytris, imprimis sinistr. N is o trae sp., Kamerun et Madagascar, Afr. Perith. 100-125  $\approx$  35-40; sporidia 40  $\times$  4; cellulae I-II  $50 \approx 22-24$ , cell. III  $24-28 \approx 8-10$ ; longit. total. ad apicem perith. 175-200  $\mu$ .

## ECTEINOMYCES Thaxt. - Syll. XVII p. 918.

Ecteinomyces Agathidii R. Maire, Bull. Soc. Hist. Nat. Afrique du 3918
Nord, t. 11, 1920, Extr. p. 31, tab. II fig. 18-19. — Hyalinus v. dilutissime stramineus; receptaculo multicellulari, e cellulis (plerumque 6-8) applanatis, monostichis, contexto, perithecium v. rarius
2 perithecia, nec non 1-2 appendices secundarias infra perithecia
gerenti, apice in appendicem primariam abeunti. Appendice primaria receptaculo simillina, plerumque 4-cellulari, ramos breves et
saepe ramulos filiformes elongatos gerenti. Appendicibus secundariis brevibus, 2-4-cellularibus, rarius parce ramosis. Perithecio juniori ellipsoideo-elongato, apice regulari, obtuso. Antheridiis non
visis. — Totus fungus 70-102 μ alt.

Hab. in Agathidio laevigato Er., in Mauretania Tingitana, Africa bor.

2. Ecteinomyces devexirostris Speg., Laboulb. Arg. p. 536, fig. 79. — 3919 Majusculus, hyalinus; receptaculo lineari recto v. flexuoso 32-36-mero, deorsum vix attenuato, sursum recte in androsticho lineari brevi 6-8-mero mox deciduo producto, cellulis fere omnibus longitudine parum latioribus; antheridia non visa; appendicibus paucis filiformibus breviusculis; perithecio sub ellipsoideo superne abrupte in ostiolo cylindrico saepius longiore apice obtuso minute bilabiato; in juventute erecto ad maturitatem devexo, producto.

Hab. in elytris et abdomine Copropori argentini,

3922

La Plata, frequens. — Alt. tot. 500-600  $\mu$  ; perith. sine ostiolo 80-115  $\approx 30\text{-}35$  .

3. Ecteinomyces argentinensis Speg., Laboulb. Arg. p. 533, fig. 77.— 3920 Majusculus, hyalinus; receptaculo lineari recto v. flexuoso 15-22-mero, deorsum leniter attenuato sursum recte in androsticho lineari 12-20-mero producto, cellulis omnibus longitudine duplo triplove latioribus; antheridia pauca articulis supremis androstichi lateraliter insidentibus, appendicibus fere nullis; perithecio ovato superne abrupte in ostiolo conico recto breviore apice obtuso attenuato.

Hab. in thorace et abdomine Copropori argentini, frequens, La Plata. — Perith. 160-175 × 55-60, alt. tot. 350-400 μ.

4. Ecteinomyces platensis Speg., Lab. Arg. p. 543, fig. 84. — Majusculus, subhyalinus; receptaculo late lineari recto 25-32 mero, deorsum valide acuteque attenuato, ungue nigro calcare concolore adscendente nullo v. plus minusve evoluto armato, sursum oblique in androsticho crasso brevi 7-9-mero, appendicibus ventralibus brevibus tenuibus densis barbato, producto, cellulis omnibus linearibus polyblastis v. septis verticalibus 1-3 irregulariter muralibus; antheridia non visa; perithecio receptaculo recte imposito elongato-sublanceolato sursum attenuato abrupte (e latere ventrali denticulo obtuso limitato) in ostiolo cylindrico breviore saepius rect. v. ad maturitatem patulo v. devexo apice subcapitato-acutato producto.

Hab. in toto corp. Copropori platensis, S. Catalina B. A., Arg. — Perith. sine ost.  $80-140 \times 30-38$ ; alt. tot.  $275-425 \mu$ .

5. Ecteinomyces filarius Thaxt., Proc. Amer. Acad., 1912, p. 212.
 Hab. in elytra Copropori rutili, Tucuman, Argent. (Spegazzini). — Sporidia 30-35 × 3; perithec. 70 × 14, cellula pedis 18 × 8; receptac. 230-275 × 7-9; long. total. 290-340 μ.

6. Ecteinomyces Copropori Thaxt., Proc. Amer. Acad., 1912, p. 213. 39

Hab. in abdomine C o p r o p o r i r u t i l i, Tucuman, (SPE-GAZZINI) et Guatemala (KELLERMAN).—Perith. 140-200 \* 38-48; cellula pedis et ima basilaris 20 μ; appendix 60-100; long. tot. ad apicem perithecii 325 μ.

7. Ecteinomyces major Speg., Laboulb. Arg. p. 541, fig. 82. — Major, 3924 hyalinus, modice arcuatus, receptaculo basi flabellato-contracto multicellulari cum androsticho continuo, filamentis antheridialibus simplicibus tenuibus patentiusculis, perithecio patulo incurvato cylindraceo abrupte in ostiolo parum angustiore sed conspicue longiore producto.

Hab. in therace P h a e n o n o t i S p e g a z z i n i, ad truncos salicinos in ins. Santiago, La Plata. — Perith. sine ost. 150-175  $\times$  48-50; estiol. 250  $\times$  20-30; alt. tot. 700-800  $\mu$ .

8. Ecteinomyces lumbricoideis Speg., Lab. Arg. p. 539, fig. 81. — Dioi- 3925 cus?, majsculus, hyalinus apicem versus fuscescens; receptaculis cylindricis 45-50-meris, recte in gonatophoro esomorpho 20-25-mero utrimque indefinito productis, cellulis latitudine duplo triplove latioribus superis saepius tamen subcuboideis supremisque subimbricatis atque fuscescentibus, nonnullis antheridiis conoideis curvulis sessilibus praeditis nonnullis peritheciis 1 v. plurimis nec non appendicibus filiformibus donatis; peritheciis elliptico-ovatis in ostiolo elongato attenuato incurvulo productis.

Hab. in abdomine P h a e n o n o t i S p e g a z z i n i ad truncos salicinos in ins. Santiago, La Plata. — Alt. tot. 350-500; perith, sine ostiolo  $50.55 \times 32.36$ .

9. Ecteinomyces intermedius Speg., Laboulb. Arg. p. 538, fig. 80. — 3926 Mediocris, hyalinus; receptaculo lineari 8-15-mero cum gonatophoro 15-20-mero, articulis fere omnibus longitudine latioribus, continuo, perithecio subsessili oblique adscendente v. deflexo elongato superne abruptiuscule in ostiolo cylindracco conspicue breviore subobtusiusculo producto; antheridiis parvis conoideis sessilibus solitariis v. geminatis e cellula basali filamentorum androstichi exsurgentibus.

Hab. in coxis et tibiis Phaenonoti Spegazzini, ad truncos salicinos in ins. Santiago, La Plata — Perith. cum ostiolo 125-150  $\approx 25-30$ .

10. Ecteinomyces rhytidopus Speg., Laboulb. Arg. p. 546, fig. 86. — 3927 Mediocris, hyalinus; receptaculo pentamero, cellula basali maxima elongata trasverse dense minuteque ruguloso-papillosa, ceteris subcuboideis laevibus, exappendiculato; antheridiis ad angulum superum cellularum androstichi sparsis; sessilibus minutis conoideis; perithecio erecto, pedicello subturbinato brevi fulto, subcylindraceo apice subacutato.

Hab. in elytris Phaenonoti Spegazzinii, ad truncos salicinos in ins. Santiago, La Plata. — Perith. sine ped. 75-85 \* 18-20; recept. 80-90 \* 8-18.

11. Ecteinomyces perpusillus Speg., Laboulb. Arg. p. 543, fig. 83. — 3928
Perpusillus hyalinus saepius geniculatus, perithecio subhorizontali
cellulae gynostichi majusculae ad medium usque adnato, elliptico,
eximie longiusculeque rostrata ostiolato, androstichi cellula infera

etiam majuscula dorso perithecii adfixa 1-antheridiifera, appendice simplici gracili breviuscula donato.

Hab. frequens ad antennas Rhopalophori Gestroi in nidis Attae Lundi, Sta Catalina B. A., Florecio Varela et La Plata. — Perith. 45-48 × 17-18; alt. tot. 60-65 μ.

12. Ecteinomyces? bonariensis Speg., Laboulb. Arg. p. 535, fig. 78.— 3929
Parvus, hyalinus; receptaculo turbinato brevi recte in appendice multicellulari producto, cellula subbasali perithecia saepius bina v. terna anguste lauceolata breviterque pedicellata praedita, cellulis inferis appendicis antheridia pauca sessilia ad angulum ventralem superum gerentia, appendice primo contracta sursum sensim leniterque attenuata 20-25 mera, articulis initio brevissimis longitudine conspicue latioribus serius elongata superne subfusoidea, articulis latitudine longioribus, paraphysibus omnino nullis.

Hab. infrequens in elytris Staphylini sp. parvulae, La Plata. — Perith. sine ped. 55-65 \* 14-16; alt. tot. 180-225.

Ecteinomyces thinocharinus Thaxt., Proc. Am. Ac., 1912, p. 213; 3930
 Speg., Lab. Arg. fig. 87.

Hab. in abdomine Thinocharis exilis, Temperley, Palermo et La Plata Argent.—Sporidia  $20 \times 2.5$ ; perith. 120-130  $\times$  23-27; receptaculum 55-65  $\mu$ ; appendix pedis 18  $\mu$ ; appendix 35-50  $\mu$ , ramuli 75-90  $\mu$ .

14. Ecteinomyces pusillimus Speg., Laboulb. Arg. p. 545, fig. 85. — Perpusillus, hyalinus; receptaculo lineari 3-4-mero recto in perithecio submajusculo sessili elliptico-ovato producto, androsticho filiformi 4-6 mero patentiusculo donato.

Hab. in elytris Trichopteridini sp. perexiguae, in nidis Attae, Sta Catalina B. A. et La Plata. — Perith.  $35 \times 12-13$ ; recept.  $30 \times 5.7$ 

15. Ecteinomyces zuphlicola Speg., Laboulb. Mus. ital., in Anal. Mus. 3932 Nac. Buenos Aires XXVI (1915) p. 454, fig. 2. — Subhyalinus, 150-175  $\mu$  altus; receptaculo lineari, subtoruloso, 8-10-cellulari, 75 × 10, in appendice plus minusve 15-cellulari, concolore vel obscuriore, parum angustiore, 70-80 × 6-8, non vel vix subfusoidea producto; perithecio pleurogeno, cellula apicali receptaculi inserto, subcylindraceo, 80 × 30, basi nodulo brevi, crasso, bicellulari fulto, subhyalino, lineis transversis 8-10 tenuissimis fumosis notato, deorsum abrupte cuneato-rotundato, apice conice umbonato, ostiolo minuto exappendiculato.

Hab. in Zuphio piceo, Palon, Pegù.

## MISGOMYCES Thaxt. - Syll. XVI p. 693.

Misgomyces Clivinae Thaxt., Proc. Amer. Acad., 1915, p. 49.
 Hab in margine elytrae Clivinae sp., Java (Ronyer). — Perith. 112 × 42; long. tot. ad apicem perithecii 580; latitudo maxima receptaculi 32 μ; appendix primaria 70 × 12.

3933

3935

3936

2. Misgomyces Heteroceri R. Maire, Bull. Soc. Hist. Nat. Afrique du 3934 Nord, t. 11., 1920, Extr. p. 33, tab. II fig. 20-25. — Dilutissime ambrinus, perithecio rufo-brunneo. Receptaculo 2-5-cellulari; cellulis monostichis verrucosis; cellula basali elongata-uncinata, cellulis mediis subelongatis, cellula superiore perithecium, apicalem et appendicem masculam divergentem gerenti. Appendice mascula basi inflata verrucosa, tricellulari, rarius 4-cellulari, persistenti, apice ramosa mox collabescenti, ad basim ramorum 1-3 antheridia simplicia gerenti. Perithecio lageniformi, basi verrucoso, sursum laevi, cum appendicis masculae parte inferiore concrescenti, symmetrico, in rostrum subhyalinum attenuato, ostioli obtusi, labiis 3 papilliformibus; perithecii pedicello unicellulari brevissimo, cellulis basalibus 3 parvulis. — Totus fungus 163-320 μ alt.

Hab. in Heterocero maritimo Guer., prope Hipponem Reg. Numidiae, Africa bor.

- Misgomyces Lispini Thaxt., Proc. Amer. Acad., 1915, p. 48.
   Hab. in variis partibus Lispini impressicollis, Samarang Java, Peradeniya Ceylon, et Borneo. Perith. 58-62 × 26-32; long. tot. ad apicem appendicis primariae 78-105 × 27-43; appendix ramosa 50-75; long. tot. ad apicem perithecii 110-140 μ.
- 4. Misgomyces ornatus Thaxt., Proc. Amer. Acad., 1915, p. 47.
  Hab. in margine elytrae dexterae insecti Tach y i affinis, Peradeniya Ceylon, Samarang Java. Perith. inclusa basi 80-90 × 23-30, ejus appendix terminalis 25-75 × 4,5; cellula pedunc. 14 × 11; sporidia 35-40 × 2,5; long. tot. ad apicem appendicis primariae 65 × 25, ramuli 35-45; antheridia 30 × 2.
- EUMISGOMYCES Speg., Contrib. estudio de las Laboulb. Argent. in An. Mus. Nac. Buenos Aires XXIII (1912) p. 176. Individua hemaphrodita; receptaculum simplici cellulae superpositae omnes longe biseriatae; appendices, seu rami antheridiales, plerumque ramulis sterilibus praeditae; antheridia simplicia.
- Eumisgomyces Dohrni Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 3937
   Buenos Aires, XXVI (1915) p. 456, fig.—Subparvus, 150-225 μ altus; cellulis pedicellaribus 5, sursum sensim majoribus, ad septa

constrictulis, vix fumosis; androsticho et gynosticho 3-cellularibus. apice ad maturitatem breviter separatis; psallio nigro; paraphysibus pluribus, densis, brevibus; perithecio e cylindraceo subellipsoideo, 60-85 × 30-40, atro, laevi, apice crasso obtuseque umbonato, ostiolo hyalino.

Hab. in Euplymatia Dohrni in ins. Sumatra - Laboulbeniae partitae Thaxt. valde affinis nisi etiam identicus.

### HYDROPHILOMYCES Thaxt. - Syll. XXII p. 16.

1. Hydrophilomyces elegans Speg., Laboulb. ital. II, in Anal. Mus. 3938 Nac. Buenos Aires XXVII (1915) p. 54, fig. 19. - Majusculus, 450 p. altus, receptaculo seu stipite 9-mero, cellula basali subhemisphaerica, secunda tertia et quarta alterne hypertrophicis, subclavatis, 75-100 > 30, caeteris normalibus, subcylindraceis, omnibus achrois; perithecio in gynosticho monomero sessili, elliptico-elongato, 200 > 60, sursum attenuato atque sub apice vix incrassatulo abrupteque incuryato, per aetatem vix melleo; androsticho etiam monomero, gynosticho adnato, in appendice divaricatissima, subrecta 20-22-mera, nuda, hyalina, 300 \* 20-25 producto; antheridiis non visis.

Hab. in Laccobio scutellari, « Lago di Tarzo » Venet. Ital. bor.

2. Hydrophilomyces coneglanensis Speg., Laboulb. ital. II, in Anal. 3939 Mus. Nac Buenos Aires XXVII (1915) p. 53, fig. 18. — Mediocris, 250 u altus, receptaculo seu stipite 8-mero, cellula basali subhemisphaerica, secunda tertia et quarta alterne hypertrophicis, appendices digitiformes 75-100 × 20 µ efformantibus, caeteris normalibus, cylindraceis, omnibus achrois; perithecio in gynosticho monomero sessili, late elliptico, 150 × 50, superne longe recteque attenuato-ostiolato, per aetatem melleo; androsticho etiam monomero, gynosticho adnato, in appendice adpressa, 15-16-cellulari, hyalina, 150 \* 18-19 producto, latere ventrali ramulis paucis simplicibus rectis setuliformibus ornato.

Hab, in Laccobio sinuato, prope Coneglanum, Venet., Ital. bor. - Affinis H. digitati Pic. a quo differt receptaculo latiore, appendice breviore et praecipue antheridiis simplicibus non dichotomis.

3. Hydrophilomyces digitatus Picard, Bull. Soc. Mycol. Fr. XXV (1909) 3940 p. 245, c. ic., et XXIX (1913) p. 556. — Totus hyalinus. Receptaculo lineari, e 9-15 cellulis seriatim dispositis constituto; cellula basali unica; cellulis 4 sequentibus longitudinaliter 1-septatis, lo-

culis 4 alternis in filamentum appendiculare cylindraceum, digitiforme, divaricatum productis; filamentis longitudinem totius individui fere attingentibus, inferiore longiore, caeteris sensim decrescentibus; cellulis superioribus 4-9, quadrangularibus, perithecio subsessile, elongato, basi ventricoso, superne in collum cylindraceoconicum sat angustum et partem ascigeram duplo superans producto: maturitate sporidiis curvulis repleto; appendice primaria e cellulis 8-10 uniseriatis constituta, longitudinem receptaculi subaequante. cellulis omnibus appendicularibus in filamentum exiguum dichotomice ramosum productis. (Mensurae desunt).

Hab. sub elithris, rarius ad abdominem, Och tebii marini, Trappes (Seine-et-Oise), Gallia.

Obs. Ob appendices basilares digitiformes perdistincta species: ut typus novi generis potius habenda.

HELODIOMYCES Picard, Bull. Soc. Mycol. Fr. 1913, p. 557 (Etym. Helodes, paluster). - Receptaculum e cellulis superpositis uniseriatis constitutum apice perithecium et appendices ferens; perithecium globosum apice acuminatum ostiolo lamellis quatuor mobilibus circumdato asci numerosi ut videtur tetraspori; sporidia bicellularia cellula distali majori quam basali; parietibus perithecii e 4-v. 5 seriebus cellularum constitutis; appendices septatae et dichotomae, e duplice loco orientes: in apice receptaculi, basi perithecii et ex ejusdem perithecii parietibus circa medium sitae.

1. Helodiomyces elegans Picard, l. c. p. 558, tab. XXX fig. 11-12. - 3941 Receptaculo incurvato subsigmoideo, 460-475 µ longo e 25-30 cellulis superpositis efformato, e basi ad apicem sensim latioribus, apice sub perithecii insertione subcupulato, perithecio subgloboso 190 × 150, apice in ostiolum elongatum abrupte angustato; appendicibus 4.5, infra dichotomice ramosis, septatis, hyalinis 200-225 μ circ. long.; sporidiis fusoideis bilocularibus 40 μ long. — Colore flavo-aurato pallido. Totus fungus 650-665 µ longo.

Hab. infra et ad latere Parni prolifericornis, Verdanson Montpellier Herault et Parni hygrobates, Gramont prope Montpellier, Gallia.

# AUTOICOMYCES Thaxt. - Syll. XXII p. 16.

1. Autoicomyces anaceros Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3942 Buenos Aires XXVII (1915) p. 38 fig. 2. — Parvus, primo totus hyalinus dein leniter fumosus, geminatus, alter filiformis, abortivus

vel masculus?, 100 × 5, alter evolutus, normalis, 200-250 µ altus; receptaculo 3-cellulari; androsticho 2-cellulari, in appendice crassa, obtusa, 8-10-mera, 120-125 × 20-25, cellulis 2 supremis breviter parcissimeque antheridifero-ramulosis producto; gynosticho 1 cellulari; perithecio conoideo-subcylindraceo, recto, 120-145 × 35-50, sursum attenuato, mutico, apice rotundato, labiis aequicrassis obtusis ornato.

Hab. in Laccobio sinuato, prope Roman et in « Lago di Tarzo », prov. Venet., Italia.

2. Autoicomyces crassus Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3943 Buenos Aires XXVII (1915) p. 39, fig. 3.— Majusculus, 250-500 μ alt., melleus; receptaculo 3-cellulari, cylindraceo, subhyalino; an- drosticho bicellulari in appendice 14-15-cellulari, 75-250 × 20-35 metiente producto; gynosticho quoque 2-cellulari, audrosticho omnino adnato; perithecio percrasso, 100-125 × 50-75, infuscato, sursum obtusissimo, labio ventrali in cornu crasso, modice elongato divaricatoque, octomero, 150-200 × 30-35 producto.

Hab. in Laccobio nigriceps, prope Coneglanum Ital. bor.

3 Autoicomyces melanocerus Speg., Laboulb. ital. II in Anal. Mus. 3944 Nac. Buenos Aires XXVII (1915), p. 41, fig. 5. — Parvus, 200 μ altus; receptaculo trimero, hyalino, late obconoideo; androsticho 2-cellulari, in appendice cylindracea, 35-40 × 10, 5-6-mera producto, hyalino; gynosticho adnato, 3-cellulari quoque hyalino; perithecio subconoideo, 70 × 25, atro, opaco, ostiolo bilabiato, labio infero in cornu cylindraceo-sigmoideo, 60-65 × 5-6, atro producto.

Hab. in Hydroporo palustri, prope Coneglanum nec non in « Lago di Tarzo », Venet., Ital. bor.

4. Autoicomyces fragilis Speg., Laboulb. ital. II, in Anal. Mus. Nac. 3945 Buenos Aires XXVII (1915) p. 40 fig. 4. — Parvus, 200-250 μ altus, totus hyalinus; receptaculo subcylindraceo, tricellulari; androsticho bicellulari, in appendice crassiuscula, sensim leniterque attenuata, 150 × 15-20, nuda, fragillima, 15-16-mera, cellulis duobus supremis antheridiferis producto; gynosticho connato 1-cellulari; perithecio mutico, vix infuscato, cylindraceo-subsigmoideo, 75 × 50, superne obtuso, ostiolo obtuso, labio ventrali saepe breviter producto.

Hab. in Laccobio scutellari, prope Coneglanum, Ital. boreale.

5. Autoicomyces platensis Speg., Lab. Arg. in An. H. N. Buenos Air. 3946 1917, XXIX p. 467, fig. 9. — Parvus, cellulis pedicellaribus trinis infima minore ceteris sensim vix crassioribus, appendice achroa subbrevi retiuscula 6-8-cellulari facile decidua, perithecio ellipticosubnaviculari dorso 10-11 mero convexo saturate infuscato ventre subplano 11-13-mero pallidiore.

Hab. in artubus Tropisterni och ripedis, La Plata, et Fr. lati, in Patagonia. — Alt. tot. 225-400; perith. 100-125 × 35-40.

6. Autoicomyces bicornis Thaxt., Proc. Amer. Acad. 1912, p. 214. 3947 Hab. in superficie infer. abdominis Berosisp. v. aff. gen.; Belgrano pr. Palermo Argent. — Perithec. 95-110  $\times$  40-45; ejus appendix longior 60-100  $\mu$ , brevior 70-78  $\mu$ ; appendix 135  $\mu$  long., receptaculum 80  $\times$  35; long. tot. ad apicem perithecii 175-190  $\mu$ , ad apicem appendicis int. 310-370  $\mu$ .

CERATOMYCES Thaxt. — Syll. XI p. 455, XIV p. 736, XVI p. 693, XXII p. 17.

1. Ceratomyces congener Speg., Lab. Arg. in An. M. Nac. Bnenos Ai-3948 res, XXIX (1917) p. 472, fig. 14. — Pallide melleus; cellula basali tota hyalina; ceteris receptaculi margine dorsali zona nigra opaca lata, intus crenata, donatis; perithecio subcylindraceo-conoideo, seriebus parietalibus, 20-25 cellularibus, ostiolo subobliquo parum prominulo, sub ipso ventre cornu 1-3 mero erectiusculo vix sig. moideo ornato, appendice antheridiophora elongato subconica 8-10 cellulari, latere interno ramulis antheridialibus copiosis saepius bifidis praedita.

Hab. in abdomine Tropisterni lati, Sierra de Painemal Patag. et Tr. ochreipedis, La Plata. — Alt. tot. 225-350 μ; perith. 170-190 \* 70-75.

2. Ceratomyces erostris Speg., Lab. Arg. in An. M. N. Buenos Aires, 3949 XXIX (1917) p. 474 fig. 15. — Pallide melleus; cellula basali tota hyalina, secunda omnibus androstichi ed dimidiis gynostichi e latere dorsali opace nigris, ceteris totius microphyti pallide melleis; perithecio omnino exappendiculato subcylindraceo-conoideo, seriebus parietalibus 24-26-meris, ostiolo obtuso laevi; appendice antheridiophora elongato-conoidea 8-10-cellulari, e latere interno vix prope basin, antheridiis parcis, filiformibus ornata.

Hab. in abdomine et thorace Tropisterni lateralis, La Plata — Alt. tot. 230-250; perith.  $135-140 \times 45-50$ .

3. Ceratomyces tristis Speg., Lab. Argent. p. 477, fig. 19. — Medio- 3950 cris, cellula basali hyalina, ceteris omnibus receptaculis nigris opacisque, postice secus basin appendicis antheridialis fere in cornu adnata productis; perithecio cylindraceo conico subhyalino exap-

pendiculato, ostiolo rotundato laevi terminato, cellulis serierum parietalium 14-15; appendice antheridiali mox decidua subgracili.

Hab. in abdomine Tropisterni collaris v parani, in Museo Platensi osservati — Alt. tot. 200-225 μ; perith. 100-125 × 45-50.

4. Ceratomyces aquatilis Picard, Bull. Soc. Mycol. Fr. 1913, p. 560, 3951 t. XXIX f. 6, t. XXXI fig. 20. — Receptaculo brevissimo 40-45  $\mu$  longo e cellulis tribus efformato, supra cellula tertia 2-v. 3 alias cellulas sistunt perithecium et appendicem ferentes; perithecia ovoidea, 95  $\approx$  40, involucro e quatuor seriebus cellularum constituto, infra apicem appendicem corniculatam undulatam nigram, 80  $\mu$  longam gerente; sporidiis magnis, 50  $\mu$  long., fusoideis bilocularibus, loculis subconformibus; appendice e basi perithecii adnata cylindracea, simplice (†) — Cotore hyalino, perithecio brunneolo, margine obscuriore, appendice corniculata infra nigra apice obscure brunnea. Totus fungus 135-140  $\mu$  longo.

Hab. infra abdomine Hydrochoi carinati, Trappes Seine-et-Oise, Gallia.

- 5. Ceratomyces rhizophorus Thaxt., Proc. Amer. Acad. 1912, p. 215. 3952
  Hab in artu anter. sinistr. Tropisterni, Belgrano pr. Palermo, Argent. Perithecium 100 × 40; appendix 135 × 15 (rupt.); recept. 50 μ, pes 20 μ, longit. total. ad apicem perithecii 150 μ.
- 6. Ceratomyces ventriosus Thaxt., Proc. Amer. Acad. 1912, p. 215. 3958 Hab. in superficie inf. abdominis Tropisterni, Belgrano pr. Palermo, Argent. — Perithecium 550-700 v 100-116 (inf.) et 65-75 (super.); appendix 250-350 v 30.
- 7. Ceratomyces marginalis Thaxt., Proc. Amer. Acad. 1912, p. 216. 3954 Hab. sub margine elythrae minuti insecti H y d r o p h y l i d i, Belgrano pr. Palermo, Argentina. Uniformiter pellucide succineobrunneus; perithecium 90-110 \* 35-45, appendix longior 100 μ; receptaculum, pede incluso, 55-60 \* 30; appendix 60 \* 7; longitudo totalis ad apicem perith. 135 150, ad apicem appendicis 225 μ.
- 8. Geratomyces intermedius Thaxt., Proc. Amer. Acad. 1912, p. 217. 3955  $\it Hab$ . in margine sinistro thoracis Tropistern isp., Belgrano pr. Palermo, Argentina. Perithecium 310-390  $\times$  80-105, basis 50-60  $\mu$ ; appendix 105-170; receptaculum leviter succineo-tinetum 74-82  $\times$  75-78, pedicellus 30  $\mu$  long.; appendix 200-45-48 (basi), longit. totalis 660  $\mu$ .

SYNAPTOMYCES Thaxt., Proc. Amer. Acad. 1912, p. 217. — Recep-

taculum indeterminatum, e cellularum superpositarum serie constans; seriei apex in cellulas binas collaterales productus; ex his altera cellula est separata a singula cellula minuta oriente e cellula basilari appendicis, altera vero est basis seriei exterioris formans parietem cellularem perithecii. Appendix constat e serie cellularum superpositarum, ramulos sparsos edente. Perithecium pluricellulare, indeterminatum, ventri a rostro non discreto, superne introrsum appendiculatum.

1. Synaptomyces argentinus Thaxt., I. c. p. 218.

3956

Hab. in margine sinistro thoracis H y d r o c h a r i t i s sp., pr. Belgrano Palermo, Argentinae. — Perithecium 335  $\times$  80-390  $\times$  105; appendix sine ramulis terminalibus 110-120  $\mu$ ; receptaculum 250-275  $\times$  70-80; perithecii longitudo totalis 700-750.

#### COREOMYCES Thaxt. - Syll. XVII p. 924.

1. Coreomyces argentinensis Speg., Lab. Arg. p. 485, fig. 27. — Subhya-3957 linus, brevis, ungue obconico v. hemisphaerico-obconico levi, stipite cellulis tribus sterilibus efformato, cellulas trinas tabulares contiguas, filamentis antheridialibus breviusculis gracilibusque ornatas fulcente, cellula pedicellari subcuboidea, perithecio clavulato superne rotundato ostiolo grosse cylindraceo-papillato coronato.

Hab. in abdomine Corisae forcipitis prope La Plata, Argent. — Alt. tot. 225-275; perith. 100-110 × 35-40 (sine ped.).

2. Coreomyces australis Speg., Lab. Arg. p. 486, fig. 28. — Subhyalinus, 3958 elongatus, ungue brevi conoideo levi, stipite 8-9-mero articulis magnitudine ludentibus, minoribus saepius antheridiferis, cellulis 4 sequentibus contiguis tabularibus antheridiferis, antheridiis gracilibus, brevibus, cellula pedicellari elongata, perithecio submelleo lanceolato apice non papillato sed suboblique subtruncato-ostiolato.

Hab. in margine anulorum abdominis Corisae forcipitis, pr. La Plata, Arg. — Alt. tot. 450-500  $\mu$ ; perith. 140-150  $\times$  42-45.

3. Coreomyces subdivisus Thaxter, Proc. Amer. Ac. of Sc., 54., 1918, 3959 p. 231. — Uniformiter undique pallide flavo-brunneo; infra perithecio cellulis cladophoris presentibus. Perithecium 80-88 × 28-30; appendicibus 125 long.; totus fungus 150-175 μ long.

Hab. in inferiore parte abdominis Corisae sp., Conception Chile, America austr. — C. Corisae proximus.

4. Coreomyces acuminatus Thaxter, Proc. Amer. Ac. of Sc., 54., 1918, 3960 p. 231. — Subgracilis, subsigmoideus, apice abrupte acuminatus;

appendicibus parcis, subbrevibus. Totus fungus 210 u long., axe inf. 16 \( \mathref{u} \) cr.; perithecio 80 \( \times 28 \), cellula pedicellari 20 \( \times 22 \).

Hab. ad marginem abdominis Corisae sp., Conception Chile, America austr.

- 5. Coreomyces italicus Spegazzini, Obs. microbiol in An. Soc. Cient. 3961 Argentina t. 85., 1918, Extr. p. 13, cum icone. - Ita vocanda est Coreomyces Corisae Speg. nec Thaxt.
- 6. Coreomyces elongatus Spegazzini, l. c. cum icone. Ita vocanda 3962 est Coreomyces incurvatus Speg. nec Thaxter.

#### EUZODIOMYCES Thaxt. — Syll. XVI p. 694.

1. Euzodiomyces capillarius Cépède et Picard, C. R. Ass. franc. Avanc. 3963 Sc., Reims 1907, p. 778; Bull. Scient. France et Belgique t. XLII, 1909, p. 263, tab. IV fig. 9; Bull. Soc. Mycol. 1913, p. 564. -- Omnino hyalina; receptaculo angusto elongato subrecto, apicem versus incurvato e cellulis stratosis (40 circ. series efformantibus) constituto; peritheciis et appendicibus uno latere tantum dispositis; appendicibus nunquam ramosis, plus minus e basi curvulis, terminalibus longissimis flexuosis, omnibus septulatis, intricatis, peritheciis 80 µ circ. long., receptaculo 480 × 50, appendicibus majoribus 640,  $2-3 \mu$  latis.

Hab. in elytris et abdomine Lathrobii multipunctati, ad ripas fl. Slack Ambleteuse, Pas-de-Calais, Galliae.

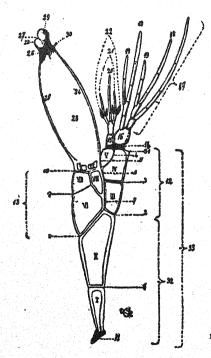
THRIPOMYCES Speg., Laboulb. ital. II, in Anal. Mus. Nac. Buenos Aires XXVII (1915) p. 71. - Receptaculum hyalinum lineare, primo abbreviatum hippocrepicum, serius elongatum suberectum, cellulis pluribus monostichis constitutum, tribus infimis crassioribus sterilibus, cum quarta vix angustiore, e latere antheridifera, et quinta magis angusta, etiam sterili, fere bulbum constituentibus, ceteris 7-9 subcylindrace's, nudis, maturando elongatis apice abrupte, perithecio solitario ovato, saepius curvnlo, chlorino coronatis. Antheridia pauca, filiformia, simplicia.

1. Thripomyces italicus Speg., loc. cit. p. 72 fig. 38. — Caespitosus, te- 3964 nerrimus, hyalinus, primo saepius hyppocrepicus subtorulosus, serius elongatus divaricatus sursum arcuatus, 300-1000 µ altus; stipitibus 11-13-meris, achrois, cellulis 4 basilaribus semper valde abbreviatis, crassioribus, basin bulbosam 50-125 \* 25-40 simulantibus, ceteris gracilioribus, cylindraceis, initio brevibus, serius conspicue elongatis, ad septa non vel vix constrictis; ramulis antheri-

diferis tenuibus, elongatis, 75-250 × 2-5, vix furcatis, e cellula quarta basali pleurogene fasciculatim exsurgentibus; peritheciis acrogenis, solitariis, conoideis, 65-150 × 20-50, saepius leniter inaequilateralibus et curvulis, basi truncatis, apice acutis, primo hyalinis dein chlorinis.

Hab. in Hydraen a sp., prope Coneglanum, Ven., Ital. bor.

LABOULBENIA Mont. et Rob. — Syll. VIII p. 909, IX p. 1132, XI p. 450, XIV p. 730, XVI p. 682, XVII p. 918, XX p. 12 \*).



\*\*) I. Cell. basalis seu I. — II. Cell. praebasalis s. II. — III. C. geminata dorsalis infera s. III. — IV. C. gem. dors. supera s. IV. — V. C. subdorsalis s. V. — VI. C. gem. ventralis inf. s. VI. — VII. C. gem. ventr. sup. s. VII. — VIII. C. intermedia s. VIII. — IX. C. hypocarpa dors. s. IX. — X. C. hypoc. ventr. s. X.

1. Septum basale v. I. - 2. S. subbas. v. II. - 3. S. androstichi v. III. - 4. S. subd. v. IV. - 5. S. intermed. superum v. v. - 6. S. intermed. medianum v. vi. - 7. S. interm. inf. v. vii. -8. S. praebasale v. VIII. - 9. S. gymnostichi v. ix. - 10. S. hypocarpicum v. x. - 11. Unguis. - 12. Androstichum s. series cellularum receptaculi partem masculam fulcens. - 13. Gymnostichum s. series cell. recep. partem foeminam sustinens.-14. Psallium s. annulum hyalinum (Hyalo - ) v. nigrum (Melano - ) androstichum coronans.-15. Andropodium s. cellula aparatum antheridiferum gereus. - 16. Paraphysopodium s. cell. paraphyses gignens. - 17. Axis paraphysum primarius. - 18. Paraph. se-

cundariae. — 19. Paraph. tertiariae. — 20. Axis antheridiophorus primarius. — 21. Axes antheridiophori secundarii. — 22. Antheridia. — 23. Perithecium. — 24. Perith. dorsum v. pars dorsalis. — 25. Perith. venter v. pars ventralis. — 26. Hy-

<sup>\*)</sup> Cnfr. FAULL, Cytology of Laboulbenia, in Annals of Botany, XXVI, apr. 1912, 4 tab.

<sup>\*\*\*)</sup> Nomenclaturae explicationem partium et sectionum vastissimi generis Laboulbeniae cfr. apud Spegazzini, Rev. Lab. argent. 1917 in Anal. Mus. Nac. Hist. Nat. XXIX, p. 552-557 et fig. schem. p. 553.

postomum v. umbo perithecialis. — 27. Ostiolum. — 28. Ostioli labium ventrale.— 29. Ost. lab. dorsale. — 30. Trichogyni reliquiae. — 31. Angulus dorsalis. — 32. Pedunculus receptacularis. — 33. Receptaculum.

(Secundum Cl. C. SPEGAZZINI in l. c.)

# Conspectus dichot. Sectionum gen. LABOULBENIAE (sec. Spegazzini, Las Laboulb. argent., in l. c. p. 555).

1 {	Species ob perithecio v. receptaculo irregulares Species omnibus partibus regulares	Zigolaboulbenia Eulaboulbenia	2 7
2 {	Androstichum et gymnostichum disjuncti . Androstichum et gymnostichum conjuncti .	Cerajomyces	3
3	Cellula I et II proliferantes et tuuc parte pedi- cellari receptaculi 3-polimera	Misgomyces	
1	Cellula I et II regulares		4
. (	Cellula V androstici proliferante	Pleocytia	5
4 {	Cellula V androstici simplice, regularis, semper paraphysibus destituta.	Haplocytia	6
5 {	Pasllium nullum	Apsallia Psalliophora	
6 {	Cellulae VI-VIII conne- { regulares et subnormales xae, III et IV   in unam confluentes .	Laboulbeniopsis Laboulbeniella	
7 (2)	Perithecium et receptaculum appendicibus v. pro- minentiis variis praediti  Perithecium et receptaculum appendicibus v. pro- minentiis variis destituti		8
8 }	Appendices v. prominentiae receptaculares v. paraphysariae raro peritheciales praesentes  Appendices v. prominentiae peritheciales tantum praesentes	Metalaboulbenia Paralaboulbenia	9
9 {	Receptaculum verrucis, spinulis, gibbis ad peri- thecium quandoque effusis, praeditum; ap- paratum paraphysum normale	Thelesoma	10
10 {	Axis paraphysum anormalis inflatus	Pachymastiga .	11
11 {	Andropodium digitatum, corniculatum v. spathu- latum	Ceratodactyla Pseudoditheca	

154	Laboulbeniomycetæ, Laboulbenia.		
12(8)	Perithecium verrucosum, gibbosum, corniculatum etc., sed ostiolo semper normali praeditum	Theletheca	
	Perithecium estiele anormali praeditum appendicibus variis ornatum	Ceratotheca	13
13 {	Psallium nullum v. indefinitum	Aphanopsallia Psalliomela	
14(7)	Psallium nullum v. hyalinum	Hyalopsallia Melanopsallia	15
15	Apex androstici a gymnostico et a basi perithecii liber	Schizosonia	16
16	Perithecia distincte pedicellata, androstico omnino libera	Podocarpa Apodotheca	17 18
17	Paraphyses omnino nigrae, opacae, rigidae sub- carbonaceae	Anthracotricha Malacotricha	19
18	Receptaculum omnino nigrum v. opacum, cellula I. excepta Receptaculum subhyalinum, pro parte antum	Dichroma	
19(17)	Perithecium e basi ad apicem omnino liberum. Perithecium cum androstico plus minus connexum	Subdichroma Eleutherocarpa	20
20 }	Perithecium usque ad apicem, v. parum infra, androsticho connexum . Perithecium infra medium androsticho connexum	Synandrocarpa Hemisyncarpa	21
21 {	Paraphyses omnino nigrae, opacae et rigidae Paraphyses incolorae v. leniter coloratae	Anthracochaeta Malacochaeta	22
22	Paraphyses omnes rudimentales v. peritheciò breviores  Paraphyses omnes v. nonnullae perithecium superantes	Brochymastiga	23
23 {	Paraphyses ex axi primario unico (v. 1-2 secundarios rudimentales praedito) constantes  Paraphyses ex axibus primariis plurimis constantes	Monomastiga	24
24	Paraphyses ex axibus 2-3 praeditae, v. axi primario unico (et 1-2 secundarios distinctos praedita) constantes  Paraphyses ex axibus plus minus numerosis (ultra	Oligomastiga	
1	3) constantes	Macromastiga	

1. Laboulbenia Argutoris Cépède et Picard, Bull. Scient. France Belsgique t. 42., 1909, p. 260, tab. III fig. 4-5. — Perithecio receptaculo lateraliter connexo, parte superiore tantum libero, ovoideo, 95-120  $\times$  40, cum receptaculo 200-250  $\mu$  longo, primum hyalino demum praecipue ad basim obscurato; trichogyno filamentoso, multicellulari, ramoso; receptaculo basi leniter incurvato, parietibus crassis praedito, cell. 2. omnibus longiore, 3. longiore quam latiore, 5. minima; appendice externa solitaria, crassa brevi simplici, 90  $\mu$  longa, interna solitaria, raro divisa perithecium vix superante; antheridiis brevibus inflatis, terminalibus, 4-5 congestis.

Hab. in Pterosticho (Argutor) intersticto, ad ripas fl. Slack, Ambleteuse (Pas-de-Calais), Gallia, etiam in Pedio siculo Ficuzza (Palermo) (in Picard, l. c. t. 50., 1916-1917, p. 452). — Lab. polyphagae affinis.

2. Laboulbenia gracilipes Cépède et Picard, C. R. Ass. Franc. Avanc. 3966 Sc. Reims 1907, p. 778; Bull. Scient. France et Belgique, t. 42., 1909, p. 261, tab. III, fig. 7. — Tota olivacea, cell. 1. et 2. exceptis plus minus hyalinis; perithecio magno, medio inflato, 80 × 40, basi receptaculo adnato, apice applanato nigro-maculato poro medio apicali; collo infra et supra gracili medio parum inflato, cellula 2. longiori infr. apice incurvata; appendicibus e cellulis basilaribus ortis, externa crassiori e basi divisa, interna minori etiam e basi divisa; totus fungus append. exceptis 170-180 μ longus.

Hab. ad elythras Bembidii minimi, ad ripas fl. Slack, Ambleteuse (Pas-de-Calais), Gallia. — L. pedicellatae proxima.

3. Laboulbenia Thaxteri Cépède et Picard, Bull. Scient. France et Bel- 3967 gique t. XLII, 1909, p. 260 tab. III fig. 6; Bull. Soc. Mycol. Fr. 1913, p. 544 t. XXIX p. 2-3. — Perithecio atro apicem versus anguste ovoideo 100 × 38, cum receptaculo 340-410 μ long., collo elongato angusto cellula 1. brevi 2. elongatissima efformato, receptaculo e basi cell. 3. et 6. subaequalibus parallelis sensim tenuiterque expanso; cell. 5. minuta subtrigona; appendicibus duobus, exteriore gracili septis transversis duobus inferioribus nigricantibus, interiore breviori.

Hab. in Tachypo flavipedi, Andrésy Seine-et-Marne (PICARD), Compiègne (BEDEL), Ducey Manche (PASQUET). — Proxima L. gracilipedi et pedicellatae sed distincta.

Laboulbenia Notiophili Cépède et Picard, Bull. Scient. France Bel- 3968 gique, t. 42., 1909, p. 259, tab. III fig. 1-3. — Tota brunneo-olivacea 195 μ longa; perithecio regulariter ovoideo 85-95 \* 32, apice

angustato poro bilabiato, labiis inaequalibus; receptaculo cylindraceo basi incurvato, brunneo olivaceo cell. 2. longiore, cell. 3. et 6. subquadratis, 5. minori; appendicibus paucis, externa solitaria crassa et longa, 320-350  $\mu$ , apicem versus sensim attenuata, cellulis subtorulosis efformata, internis 1-3, gracilibus brevissimis apicem receptaculi non attingentibus quandoque dichotomice divisis, antheridiferis; antheridiis elongatis plerumque duobus lateralibus; sporis medio curvatis.

Rab. ad prothoracem, elythras, capitem Notiophili semipunctati, Mortain (Manche), Gallia (Abbé PASQUET).

5. Laboulhenia Lichtensteini Picard, Bull. Scient. France Belgique t. 50, 3969 1916-1917, p. 449, tab. VI fig. 5 (an 6 ?). — Brunneo-olivacea hinc inde obscuriori, basi receptaculi subhyalina. Perithecio ovoideo-cylindraceo 130 μ longo, apice rotundato ostiolato, brunneo-olivaceo apicem versus nigro maculato, labiis hyalinis; sporis magnis 85 μ long.; cellulis receptaculi basali et subbasali cylindraceo-obconicis longitudine subaequantibus; cell. 3. obscuriori, 4. et 5. parvis subapplanatis, parte superiore receptaculi transverse sulcatula; appendicibus brevibus apicem perithecii non attingentibus, fragilibus caducis, mox collabescentibus. Totus fungus 280-300 μ long.

Hab. in Cilleno laterali, Roscoff (Finistère), Gallia (J. LICHTENSTEIN), nec non prope Carteret (Manche) (PICARD) et Brest (PERRIS). — Lab. pedicellatae Th. et L. luxurianti Pey. proxima.

6. Laboulbenia Achenii R. Maire, Bull. Soc. Hist. Nat. Afrique du 3970 Nord, t. 11, 1920, Extr. p. 28, fig. 7. — Receptaculo praeter cellulam basalem subhyalinam laevem dilute brunneo-verrucoso; cellula basali obconica, longiuscula; cellula subbasali brevi, lata; cellulis androstichi lateraliter dejectis, perithecio fere perpendicularibus; cellula 6 applanata brevissima; cellula 3. brevi, perithecii basim attingenti; cellulis 4. et 5. parvis, subquadratis, septo subobliquo separatis; cellulae 5. facie interna libera; psallio nigro, crasso; appendices externac dilute brunneolae, basi et apice, subhyalinae, simplices, divaricatae, cellulis superioribus elongatis; appendices internae cellula inferiore minima, brevissima, antheridia 1-2 gerenti. Perithecio libero, dilute brunneo, ovoideo, apice attenuato; ostioli labiis vix inflatis, rectis, apice hyalinis, basi maculis nigris parvis praeditis; ascosporae fusiformes, 1-septatae, loculo superiore inferiore triplo longiore. — Totus fungus 142-158 μ alt.

Hab. in Achenio tenello, pr. Hipponem Reg. Numidiae, Africa bor.

7. Laboulbenia marina Picard, C. R. Seances Soc. Biologie t. LXV, 3971 1908, p. 584, Bull. Soc. Mycol. de Fr. 1913, p. 546, tab. XXXII, fig. 21. — Receptaculo rigido e cellula basalt et subbasali elongatis efformato supra eroso subcupuliformi perithecium et appendices gerente; perithecio ovoideo-conoideo, 76 μ longo, translucido, apice attenuato et rima ostiolari eccentrica donato; appendicibus e cellulis duobus ortis, exteriori crassiori; 4 appendicibus pro quoque cellula, brevibus transverse nigro-septatis; sporidiis bilocularibus 26 μ long., cellula distali secties breviori quam basali. — Colore pallide flavo. Totus fungus 150 μ long.

Hab. in Aepo Robini, insula Tatihou prope St. Vaast-la-Hougue, Manche, Gallia.

8. Laboulbenia antarctica R. Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 3972 p. 229. — Subuniformiter pallide brunneo-olivacea demum obscuriori, cellula basali pallidiori, caeteris partibus receptaculi punctatis v. maculatis; appendicibus forma cospicuis. Perithecio 75-85  $\pm$  25-32; sporis 35  $\pm$  3,5; receptaculo e cellula basilari 9-105  $\mu$ ; appendicibus longioribus 130  $\pm$  3,5-5; totus fungus e apice perithecii 150-175  $\mu$ , maxima latitudine 40-45  $\mu$ .

Hab. ad basim coxarum? Antarctide sp., Punta Arenas, Fret. Magellani, Chile America austr. — L. orientali affinis.

9. Laboulhenia australis Thaxt., Proc. Amer. Acad. 1912, p. 202.
 Hab. in toto corpore A p a n e s spec., Tucuman, Argent. — Perith. 110 × 40, appendix longior 250 μ; receptac. 100-235 μ; long. total. ad apicem perith. 250-300 μ.

Laboulhenia fuscata Thaxt., Proc. Amer. Acad. 1912, p. 197.
 Hab. in artubus Argutoris bonariensis, Ins. Santiago pr. La Plata.— Perith. 110 × 40; receptac. 135 × 40; tot. longit. 215 μ.

11. Laboulbenia bonariensis Thaxt., Proc. Amer. Acad. 1912, p. 199. 3975

Hab. in locis variis corporis Argutoris bonariensis,

La Plata, Buenos Aires, Llavallol, Temperley, Argent. — Sporidia

70 × 6; perith. 135 × 35 usque ad 210 × 55; receptaculum 235-335

× 50-70; appendix longior 200 μ; long. tot. ad apicem perithecii

300-500 μ.

12. Laboulbenia granulosa Thaxt., Proc. Amer. Acad. 1912, p. 198; 3976 Speg., Lab. Arg. fig. 158.

 $\it Hab$ . in artubus Argutoris bonariensis, Insula Santiago pr. La Plata et Argutoris urugayaci, Montevideo (SPEG.) — Perith.  $110 \times 40$ ; receptac.  $135 \times 40$ ; longit. total.  $215 \mu$ .

13. Laboulbenia lutescens Thaxt., Proc. Amer. Acad. 1912, p. 200; Lab. 3977

fumosa Speg. non Thaxt.

Hab. in margine exter. elytrae sinistrae Argutoris bon ariensis, Buenos Aires, Temperley et Llavallol Argent. — Sporidia 78 × 7; perith. 125-145 × 25-40; receptac. 100-135  $\mu$ ; long. total. ad apicem perithecii 225-275  $\mu$ .

Laboulbenia subinflata Thaxt., Proc. Amer. Acad. 1912, p. 199; Speg. 3978
 Lab. Arg. fig. 170.

Hab. in margine sinistro prothoracis sup. Argutoris bon ariensis, Buenos Aires, Llavallol Argent. et Arg. postici, Arg. confusi et Arg. bon ariensis, Misiones, Tucuman, Sta Catalina et La Plata (SPEGAZZINI). — Sporidia 55 × 5; perith. 175-185 × 45-50; receptac. 310-415 × 62-78, cellula subbas. latior 187 × 75; appendices 200-215; longit. tot. ad apicem perithec. 350-585 μ.

15. Laboulbenia andina Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 3979 p. 230. — Olivaceo-brunnea, infer. parte perithecii obscuriori; minuta, brevi, crassa, perithecio distincte longiori et latiori quam receptaculo et regione basali; cellula basali lata pallida, subbasali minori et angustiori, septis appendicum externarum simplicium nigris Perithecio 65-70 × 24-28; sporis 25 × 3; appendicibus 28-35; totus fungus 108-112 μ long., a cellula basilari 42 μ.

Hab. in pedibus Bem bidii, Baños de Apoquindo Chile, America austr.

3980

16. Laboulbenia flexata Thaxt., Proc. Amer. Acad. 1912, p. 203.

Hab. in margine inf. sinistr. prothoracis Brachini sp. in Ins. Santiago La Plata (Spegazzini). — Perith. 155-200  $\times$  48-55; recept. 275-390; appendix exter. 135-155  $\times$  40, longior 200  $\times$  50; inter. append. 50-60  $\times$  12, ramuli longiores 120-140  $\mu$ .

17. Laboulbenia Giardi Cépède et Picard, Bull. Scient. France et Belgique t. XLII, 1908, p. 258, tab. III fig. 10-11; Bull. Soc. Mycol. Fr. 1913, p. 543, fig. 8. — Pallide flava 280-386 μ longa; perithecio maturo parum obscuro receptaculo concolori, elongato regulari subcylindrico 140-180 × 60-65, apice contracto circa porum nigrescente; receptaculo recto, subtrigono, basi attenuato, parietibus infra appendicibus crassis; cellulis 1-2, longioribus quam latioribus, 3-4, parallelis; appendicibus circ. 8 e basi divergentibus, externa infra obscurata, sporidiis fusoideis parum curvatis, 64 × 8, cellulis duobus dissimilibus efformatis, superiori 40 μ circ. longa, inf. circ. 15 μ.

Hab. in Bradycello (Dichirotricho) pubescenti, Corolles Manche (A. PASQUET) et Ambleteuse Pas-de-Calais (PICAED),

in Dichirotricho obsoleto, Palavas Hérault (PICARD).

18. Laboulbenia Pasqueti Picard, Bull. Soc. Mycol. Fr. 1913, p. 550, 3982 t. XXXII p. 22. — Receptaculo 125 μ longo, infra pedunculo brevi donato, supra perithecio adhaerenti; pedunculo e cellula basali brevi et pro parte e cellula subbasali efformato; perithecio magno subcylindraceo 90 ≈ 36-40, supra tantum libero, infra et lateraliter receptaculo adnato, apice abrupte constricto rotundato; e cellula basali nigra anuliformi cellulis duobus elongatis, interiore minore, ortis, appendices elongatas multiloculares simplices gerentibus. — Colore flavo-succineo et parum brunneo; cellulis III et IV receptaculi maculis transversis brunneis donatis; perithecio infra collo maculis duobus nigris praedito; appendicibus flavo-succineis.

Hab. in Chlaenio variegato, Tournus Saone-et-Loire Gallia.

19. Laboulbenia Deltomeri Maire, Bull. Soc. Hist. Nat. Afrique du 3983 Nord, t. VII, 1916, p. 30, tab. I, fig. 1. - Maior (a pede usque ad apicem perithecii 410 μ, appendices usque ad 550 μ long.). Perithecii oblongi, 190 > 58, olivaceo-brunnei, basi et sub ostiolo pallidi, longitudinaliter sulcati, ostiolo abruptiuscule constricto; papillae ostiolares basi atratae, labiis hyalinis. Ascosporis ad 1/4 inferiorem 1-septatis, hyalinis, laevibus, utrinque acutis, 75 × 3. Receptaculo obconico, 220 µ long., melleo, subtillime verruculoso, in pariete externa cellularum III et IV brunneo-suffuso. Appendicum pedicello e cellulis IV et V constituto, a perithecio divaricato; appendicibus perithecium valde superantibus, psallio (insertionis cellula) atrato, crasso; appendicum cellulis basalibus valde inaequalibus, appendicis externis cellula basali multo maiore. Appendice externa basi subhyalino dichotome ramoso, ramis a basi vel a regione supra-basali brunneis. Appendice interna invenili breviter ramosa, antheridifera, adulta longe ramosa et antheridiis exoletis, sterili.

Hab. in elytris Deltomeri punctatissimi Fairm., Djebel Tamesguida Algeria, Africae bor. (P. DE PEYERIMHOFF).

20. Laboulbenia arietina Thaxt., Laboulb. on Crysom. 1914, p. 36. Hab. in elytris Diosonychae recticollis et D. austriacae, Guatemala (Kellerman) et Trinidad. — Perith. 100-140 × 20-25; appendix termin. 18-25 μ; receptac. 60-100 × 24-28; appendix longior 150-175 μ; long. totalis ad apicem perithecii 160-240 μ.

21. Laboulbenia Dolicaontis R. Maire, Bull. Soc. Hist. Nat. Afrique du 3985

Nord, t. 11., 1920, Extr. p. 26, fig. 6. — Receptaculo verruculoso dilutissime brunneolo; cellula basali et cellula subbasali subaequilongis; cellula sexta subelongata; cellula 3. perithecii basim vix attingenti; cellulae 5. facie interna sursum libera; cellula 4. majore, a cellula 5. minore septo recto, psallio nigro perpendiculari, separata. Appendices externae simplices, divaricatae, cellulis inferioribus subaequalibus, dilutissime brunneolis, superioribus subhyalinis; appendices internae, cellula inferiore parva, brevi, 2 ramulos antheridiferos breves gerenti. Perithecio praeter basim libero, dilutissime brunneolo, subfusiformi, laevi, apice laeniter, attenuato; ostioli labiis inflatis, incurvis, apice hyalinis, basi nigro-maculatis; ascosporae fusiformes uniseptatae loculo superiore inferiore duplo longiore. — Totus fungus 300-360 µ alt.

Hab. in Dolicaonte densiventri Fauvel, prope Hipponem Reg. Numidiae, Africa bor.

- 22. Laboulbenia marginata Thaxt., Proc. Amer. Acad, 1912, p. 205. 3986 Hab. in superf. inferiori abdominis Galeritae Lacordairei, Argentina, (ex Museo Nacional n. 1428). Perith. 250-275 × 52, excluso pede; ped. 58 × 30; receptac. 190-200 × 90; appendices ad apicem ramulorum 175 μ; antheridium 24 μ, cellula ejus basilaris 20 μ; long. totalis ad apicem perith. circ. 500-510 μ.
- 23. Laboulbenia inflexa Thaxt., Proc. Amer. Acad. 1912, p. 204 (L. 3987 infleta).

Hab. in elytra sinistra Galeritae spec. nigrae, La Plata (SPEGAZZINI). — Perith. 110-128  $\approx$  35-38, pedic. 15-20  $\approx$  8; recept. 98  $\approx$  40-45; cellula ejus basil. 45-50  $\approx$  20; appendices 20 μ, ramuli 50-75 μ; antheridium 20 μ, ejus pedic. 10-12 μ.

Laboulbenia sordida Thaxt., Proc. Amer. Acad. 1912, p. 206; Speg. 3988
 Rev. Lab. Arg. fig. 126 i.

Hab. in apice elytrae Galeritae Lacordairei etc., La Plata — Perith., dempto pedicello, 215-235  $\times$  45-47, pedicell. 27-31  $\times$  27; receptac. 215  $\times$  66; appendices ad apices ramulorum 160  $\mu$ ; antheridia 23-27  $\times$  6.

Laboulbenia funeralis Thaxt., Proc. Amer. Acad. 1913 p. 208, Speg. 3989
 Rev. Lab. Arg. fig. 115.

Hab. in margine elytrae Gyrini ovati, pr. Palermo et La Plata Argent. — Peritheciam 110-155 × 35-40; appendix termin. longior 20 μ; long. tot. ad apicem perithecii 235-350, latitudo maxima 38-68 μ.

26. Laboulbenia Grylli Thaxt., Proc. Amer. Acad. 1915, p. 45.

3991

Hab. in superf. inf. abdominis Grylli albifrontis, Samarang, Java. — Perith.  $500\text{-}750 \times 100\text{-}120$ , apex  $70\text{-}75 \times 18$ , restrum  $50~\mu$  (basi),  $32~\mu$  vertex; sporidia  $45 \times 7$ ; recept. cell. basil.  $160 \times 70$ , subbasal.  $550\text{-}780 \times 60$ ; long. tot. ad apicem perithecii  $1300\text{-}1700~\mu$ .

- 27. Laboulbenia subulata Thaxt., Proc. Amer. Acad. 1915, p. 46.

  Hab. in superf. inf. abdominis Grylli burdigialensisCerisyi, Indo-Malaya. Perith. 500 700, venter 120 × 58, apex
  48-20; sporidia 28 × 4; receptac. 275-400 × 58.
- 28. Laboulbenia idiostoma Thaxt., Laboulb. on Chrysom. 1914, p. 28. 3992

  Hab. in antennis Halticae jamaicensis, Eunery, Hayti
  (MANN). Perith. 122 × 30-35; receptac. 70-85 × 35-42, appendix longior 200 μ; long. tot. ad apicem perithecii 175 μ.
- 29. Laboulbenia fuliginosa Thaxt., Laboulb. on Chrysomel. 1914, p. 28. 3993 Hab. in elytris et superf. inf. Halticae plebejae, H. amethystinae, H. jamaicensis et H. spec., Hayti, Cuba, Vera Paz, Jamaica. Perith. 100-125 × 40-48; sporidia 55 × 5,5; receptaculum 150-200 × 45-52; appendix longior 95; long. tot. ad apicem perithecii 60-90 μ.
- 30. Laboulbenia Halticae Thaxt., Laboulb. on Chrysomel. 1914, p. 29. 3994 Hab. in Haltica sp., Kamerun (SCHWAB) et Systena Deyrollei, Port of Spain Trinidad. Perith. 70-90 × 25-30; receptac. 85-125 × 25-30; appendix longior 150 μ, rarius 227 u; longit. tot, ad apicem perithecii 125-210.
- 31. Laboulbenia funebris Thaxt., Laboulb. on Chrysomel. 1914, p. 44. 3995 Hab. in elytris Halticae sp. (?), Guatemala (Kellerman).— Perith. 75-80 × 25; sporidia 45 × 5; appendix longior 140-150; long. tot. ad apicem perithecii 125-160, latitudo maxima 35 μ.
- 32. Laboulbenia cristatella Thaxt., Laboulb on Chrysom. 1914, p. 43. 3996 Hab. in superf. inf. Halticae scutellatae, Trinidad, Asphaerae Siebersii et Lacticae nigricipitis, Para Brasiliae. Perith. 60-76 × 18-22; recept. 50-64 × 22-28; appendix longior 125 μ; tot. long. ad apicem perithecii 100-140 μ.
- 33. Laboulbenia Hermaeophagae Thaxt., Laboulb. on Chrysom. 1914. 3997 pag. 32.

Hab. in apice elytrae Hermaeophagaesp., Port of Spain Trinidad. — Perith. 80-25; sporidia  $50 \times 5$ ; receptac.  $70-80 \times 30$ ; appendix longior  $70 \mu$ ; long. total. ad apicem perithecii 150-175  $\mu$ .

34. Laboulbenia Heteroceratis Thaxt., Proc. Amer. Acad. 1912, p. 207; 3998 Speg., Rev. Lab. Argent. fig. 120.

Hab. hic illic in corpore Heteroceratis ciliat icollis et validi, Sta Catalina, La Plata (SPEGAZZINI) et Kansas (A. STEWART). — Perith. 110-120 × 35-40; receptac. 156-235 μ; appendix 50-60 μ; long. total. ad apicem perithec. 220-240 μ.

3999

4003

35. Laboulbenia crispata Thaxt., Proc. Amer. Acad. 1917, p. 719.
Hab. in abdomine H i p p e l a t i s, Panama. — Perith. 85 \* 22, processus termin. 10-12 \* 3,5-4; recept. ad cell. insert. 120 μ. appendix 225; long. tot. ad apicem processus 175.

36. Laboulhenia anguifera Thaxt., Proc. Amer. Acad. 1917, p. 720. 4000 Hab. in variis partibus H i p p e l a t i s, Grenada. — Sporidia  $50 \approx 3.5$ ; perith.  $100-130 \approx 24-30$ ; incl. basi; cell. bas. et subbas.  $218-245 \approx 14-18$ , appendices longiores 210.

37. Laboulbenia Lacticae Thaxt., Proc. Amer. Acad. 1912, p. 195; Speg., 4001 Rev. Lab. Arg. fig. 127.

Hab. in apice elytrae, articulis abdominis Lacticae varicornis v. aff. spec., Palermo et Lact. nigricipitis La Plata, Argentina. — Sporidia  $45 \times 3.5$ ; perith.  $90 \cdot 100 \times 24 \cdot 28$ ; receptac.  $80 \times 15$  v.  $155 \times 22$ ; appendices longiores  $135 \cdot 150$  μ; long. total. ad apicem perith.  $175 \cdot 280$  μ.

38. Laboulbenia Lagarocerinus Thaxtér, Proc. Amer. Ac. of Sc., 53., 4002 1918, p. 703. — Cellula basali angulum rectum efformanti, inflata, duplo longiore quam latiore, ad substratum depresse adhaerenti, pallide brunnea; axi longo robusto erecto; appendicibus olivaceis erectis v. oblique incurvatis 35 μ circ. long.; peritheciis rectis v. ambitu subirregularibus 75-80 × 20-22; totus fungus, I cellula excepta, 140-165 μ long.

Hab. ad alas Lagarocerini sp. [Dipt.], Gambia River Africa trop. (Dr. Wolbach). — Ob cellula basali forma aberranti praedistincta species. Structura est typus Ceraiomyces.

39. Laboulbenia Lathropini Thaxt., Proc. Am. Acad. 1912, p. 193.

Hab. in superf. abdominis L a t h r o p i n i f u l v i p e d i s,
Llavallol Argentina. — Sporidia 75 × 8; perithec. 150-175 × 45-50;
receptac. 120-155 μ; appendix longior 900 × 16; long. tot. ad apicem perith. 900 × 16. — var. phrynostoma Speg., Rev. Laboulb. Arg. p.
612, f. 144 b. — A typo ostiolo transverse compresso late hiante, apice androstichi libero, paraphyse abbreviata ramulosaque nec non parte supera cellulae basalis tumida atque infuscata recedit. — Hab. frequens in superficie inf. capitis L a t h r o p i n i f u l v i p e d i s,
Rosario de Sta Fe Argent. — Perith. 130-175 × 40-45; alt. tot. 300-500 μ.

40. Laboulbenia rhinoceralis Thaxt., Laboulb. on Chrysomel. 1914, 4004 pag. 24.

Hab. in elytris Lemae gracilis, Para Bras. et Lemae sp., Trinidad et Surinam (ROVER). — Perith. 90-120  $\times$  20-25, ejus processus rhinoceronteus  $18 \times 6$ ; sporidia  $35 \times 3.5$ ; receptaculum  $52 \times 28$ ; appendix longior 52; long. tot. ad apicem perithecii  $125-175 \mu$ .

- 41. Laboulbenia Hottentottae Thaxt., Laboulb. on Chrysomel. 1914, p. 26. 4005 Hab. in elytris etc. Le mae Hottentottae, Zanzibar Africae orient. Perith. (excl. cellula basilari) 90-125 × 18-25; receptac. 90-110 × 25-32; appendix longior 120; long. totalis ad apicem perithecii 160-200 μ.
- 42. Laboulbenia Papuana Thaxt., Laboulb. on Chrysomel. 1914, p. 23. 4006
  Hab. in elytris L e m a e sp., Nova-Guinea. Perith. 100-125
  25-58; appendix longior 110 μ; receptacul. incl. processu et excl. pede 85-100 × 50-60; long. tot. incl. pede 200-228 μ.
- 43. Laboulbenia Manobiae Thaxt., Laboulb. on Chrysomel. 1914, p. 33 4007 Hab. in apice elytrarum Manobiae abdominalis, Madagascar (\*) Perith. 75 × 25; append. 140 μ; receptac. 70-80 × 20; longit. total. ad apicem perithecii 145 μ.
- 44. Laboulbenia Monocestae Thaxt., Laboulb. on Chrysomel. 1914, 4008 pag. 39.

Hab. in artubus Monocestae atricornis, Manaos Amazoniae (MANN). — Perith.  $85-125\times25$ ; recept.  $50-55\times25-30$ ; appendix longior 175  $\mu$ ; longit. total. ad apicem perithecii 140-175  $\mu$ .

45. Laboulbenia Monocrepidii Thaxt., Proc. Amer. Acad. 1912, p. 197, 4009 Speg. Lab. Arg. fig. 162.

Hab. in elytris Monocrepidii picti, Sta Catalina, et Monocrepidii sp., Palermo et Llavallol Argentina. — Sporidia 75 × 4,5; perithic. 120-135 × 40-45; receptac. 150-225.μ; appendix longior 80-110; long. total. ad apicem perithecii 250-325 μ.

46. Laboulbenia alpestris Picard, Bull. Soc. Mycol. Fr. 1913, p. 552, 4010 tab. XXXII fig. 23. — Receptaculo valde elongato, angusto, cellula subbasali basali duplo longiore, caeteris brevioribus, cellula quinta parva subtriangulari; perithecio brunneo-nigro ovoidec medio latiori apice obtuso rotundato, 85-90 × 30, ostiolo apicali hyalino, labiis depressis circumdato; appendicibus brunneis circa medium perithecii ortis e duobus cellulis ortis, cellula exteriori appendice unica simplice, 250-260 μ longa, interiori longitudine breviori appendice unica v. duplici donata, antheridia 2-3 gignenti; colore

brunneo-nigro opaco, cellulis receptaculi I et II subhyalinis IV et V subnigris. — Totus fungus 330-340 μ long.

Hab. ad helitras et prothoracem Nebriae castaneae et Gyllenhali, M. Cenisio N. castaneae, Mt. Joli Sabandia.

- 47. Laboulbenia partita Thaxt., Laboulb. on Chrysomel. 1914, p. 34. 4011 Hab. in elytris etc. Nisotrae dilectae, N. Chapuisi et sp., Kamerun et Madagascar. Sporidia 40 × 3,5; perith. 75-85 × 32; appendix longior 85 μ; receptac. 135 × 25; long. tot. ad apicem perith. 140-250.
- 48. Laboulberia Nodostomae Thaxt., Laboulb. on Chrysom., Proc. Am. 4012

  Ac. Arts Sc. 50., 1914, p. 30.

Hab. in apice elytrae N o d o s t o m a e sp., Mindanao Ins. Philipp. — Perithec.  $60.65 \times 25$ ; sporidia  $40 \times 4$ ; receptae.  $80 \times 35$ ; appendix longior 175  $\mu$ ; long. tot. ad apicem perithecii 130  $\mu$ .

- 49. Laboulbenia armata Thaxt., Laboulb. on Chrysomel. 1914, p. 40. 4013 Hab. in elytris O e d i o n y c h i s u b l i n e a t i, Teapa Mexico. — Perithec. 120-125  $\approx$  24 30; processus corniform. 12-14  $\mu$  long.; receptac. 70-80  $\approx$  25; appendix longior 175-210  $\mu$ : long. tot. ad apicem perithecii 175-210  $\mu$ .
- 50. Laboulbenia brasiliensis Thaxt., Laboulb. on Chrysom. 1914, p. 27. 4014 Hab. in artubus et elytris O e d i o n y c h o speciei affinis, Rio de Janeiro Bras. Perith. 130-158 × 40-48; recept. 175 × 52; appendix longior 160; long. total. ad apicem perithecii 350-380 μ.
- 51. Laboulbenia Oedionychi Thaxt., Laboulb. on Chrysomelid., in Proc. 4015 Am. Ac. Arts Sc. 50, 1914, p. 32.

Hab. in elytris O e d i o n y c h i nov. sp., Manila Ins. Philipp, (Banks). — Perith.  $80.85 \times 20.24$ ; sporidia  $48 \times 4$ ; receptac.  $90.140 \times 28$ ; appendix longior, exter. 175.230; inter. 35.80; longit. tot. ad apicem perithecii  $140.210~\mu$ .

52. Laboulhenia paludosa Picard, Bull. Soc. Mycol. 1913, p. 548 t. XXIX 4016 fig. 4. — Receptaculo recto 200-205 μ longo e cellulis I et II efformato cellulis III et IV contigue dispositis longitudine subconformibus, cellula V breviori apice praecedenti insinuata; perithecio basi receptaculo adnato breviori subcylindraceo 95 × 45, supra infra collo constricto apice labiis rotundatis diviso; cellulis perithecii spiraliter dispositis; appendicibus binis v. ternis e quoque cellula ortis 50-65 μ long., 2-3 locularibus, raro ramosis, loculis cylindraceis septis nigris limitatis. — Colore plus minus intense olivaceo.

Hab. ad helitras O o d is gracilis, Vendres prope Béziers, Herault Gallia. 53. Laboulbenia abyssalis Maire, Bull. Soc. Hist. Nat. Afrique du Nord 4017 t. VII, 1916, p. 21 fig. 3. - Media (250 280 µ alta); perithecii oblongi 100-112 × 37-40, dilute brunneoli ostiolo abruptiuscule constricto; papillae ostiolares basi atro maculatae, labiis hyalinis. A. scosporis ad 1/4 inferiorem uniseptatis hyalinis laevibus, utrinque acutis, 42 × 4.5. Receptaculo longe obconico, 200-220 µ longo, non constrincto, dilute brunneolo, in cellularum 3. et 4. parte externa plus minusve brunneo-suffuso, cellula basali excepta verrucoso: cellulis 3., 4., 5. et perithecio connatis; cellula 5. subtriangulari parva (9-11 > 5-6); psallio (insertionis cellula) atrato, tenui. Appendicum cellulis basalibus valde inaequalibus, cellulis basalibus, appendices externae cellula basali multo longiore sed vix crassiore. Appendices externae vix ramosae, parte inferiore tricellulare, crasse tunicata, plus minusve et praecipue extus brunneo suffusa, plus minusve persistente, parte superiore e cellula dolioliformi dilute brunneola inferiore et cellulis elongatis hyalinis constante. Appendice interna breviter ramosa, antheridifera, ramis sterilibus nullis, hyalina.

Hab. in elytris et pronoto O r e o c y i s B e d e l i Peyerh., Djurdjura Algeria Africa bor. (P. DE PEYERIMHOFF).

54. Laboulbenia Muiriana Thaxter, Proc. Amer. Ac. of Sc., 53, 1918, 4018 p. 703. — Pede bene evoluto, cellula basali brevi, hyalina infra septo abrupte latiori; cellula subbasali sublatiori, hyalina punctata, recta 50 × 16; cellulis II-VI et cellula basali flavis et obscure punctatis; axe perithecii cum receptaculo angulum acutum efformanti; perithecio flavo, basi leniter inflato apice factura peculiari praedito, 60-70 × 18; receptaculo 88 μ; appendicibus 368 μ long., totus fungus 115 μ long.

Hab. ad basim cruris post. e grege O s c i n i d a r u m [Dipt.], Lalok River, Nova Guinea britannica, Africa trop. (F. MUIR). — L. cristatae proxima sed punctuatione, appendicibus longissimis et apice peculiariter efformato praedistincta species.

55. Laboulbenia Pachylophi Thaxter, Proc. Amer. Ac. of Sc., 53., 1918, 4019 p. 704. — Erecta v. leniter curva; perithecio et cellula basali appendicum externarum obscure et translucide olivaceo-brunneis; cellula basali hyalina infra inflata et pede bulboso praedita; perithecio erecto et axe quandoque leniter divergenti infra olivaceo-brunneo minute granuloso-punctato; ventre vix leniter inflato apicem versus angustato, 60-65 × 22; appendicibus 70 μ long.; totus fungus 120-140 μ longus; pede bulboso 16 μ.

Hab. ad crura Pachylophi frontacis [Dipt.], Killi-

mandjaro Africa or.

56. Laboulbenia pectinulifera Thaxter, Proc. Amer. Ac. of Sc., 53., 4020 1918, p. 706. — Praecipue ad basim leniter curvula subtus ventre et cellula insertionis omnino alba v. demum brunneola; pede normali crasso, cellula basilari leniter inflata connexo; appendicibus externis fortiter divergentibus, curvulis, tricellularibus, apice caespitoso-flabellatis lateraliter plus minus pectinuliferis; perithecio supra basim leniter inflato 70-75 × 18-24, sporidiis 35-40 × 3; appendicibus 60-64 μ long., cellulis tribus basilaribus 35 μ; totus fungus ad apicem perithecii 100-150 μ long.

Hab. ad thoracem et alas? Physogeniae sp. [Dipt.], Kamerun Africa occ. — Lab. clavuliferae proxima.

57. Laboulbenia clavulifera Thaxter, Proc. Amer. Ac. of Sc., 53., 1918, 4021 p. 702. — Erecta; cellula basali et subbasali recta v. curvula; pede normali bene evoluto; cellula basali hyalina parum longiori et a subbasali, brunneola, septo plerumque obliquo separata; cellulis 3. et 6. subaequalibus et oppositis, 4. et 5. fere aequalibus v. 5. angustiori et parum longiori. Perithecio omnino olivaceo, basi parum pallidiori, ventre leniter inflato, apice angustato obtuso, 70-88 \* 18; sporis circ. 34 \* 2,5; appendicibus ab apice ramulorum 70 μ long. axe 42 \* 12; totus fungus 150-225 μ long.

Hab. ad crura? Physogeniae sp. [Dipt], Kamerun Africa trop. — Structura excepta Lab. pectinuliferae similis.

58. Laboulbenia Psilina Thaxter, Proc. Amer Ac. of Sc. 53., 1918, 4022 p. 708. — Leniter sigmoidea ventre flavido-brunneo, laxe crassiuleque punctata, cellula basilari pallidiori et punctata, cellula basilari appendicum externarum obscure olivacea, antheridiis pallidioribus caeterum subhyalina; perithecio divergenti, ventre translucido infra leniter inflato 50.55 × 18, sporidiis circ. 28 × 3; appendicibus e apice ramusculorum 55.70 μ long., totus fungus 120.140 μ long., cellula subbasali 50.62 × 18.

Hab. ad superficiem abdominis? Psilae sp. [Dipt.], Kamerun Africa. — Proxima L. pectinuliferae, sed forma generali, colore, caractere ramusculorum appendicum diversa.

59. Laboulbenia helicophora Thaxt., Proc. Amer. Acad. 1915, p. 43. 4023  $\it Hab$ . in artubus anterioribus Pericalli sp., Java (ROUYER).— Perith. 175  $\approx$  40-45, duae appendices marg. expansae 64  $\mu$ ; appendices longiores 150  $\mu$ ; recept. 275-315  $\approx$  78-85; long. tot. ad apicem perith. 390-425.

60. Laboulbenia Podontiae Thaxt., Laboulb. on Chrysom. 1914, p. 36. 4024

Hab. in elytris Podontiae luteae et Pod. 14-punctatae, Hong Kong et Himalaya. - Perith. 70-100 \* 18-20; sporidia 55  $\times$  3; receptac. 70  $\times$  24-28, usque ad 100  $\times$  28; appendices 70  $\mu$ ; long. tot. usque ad apicem perithecii 140-160, subinde usque ad 230.

61. Laboulbenia slackensis Cépède et Picard, C. R. Ass. Franc. Avanc. 4025 Sc. Reims 1907, p. 775, Bull. Scient. France et Belgique t. XLII, 1908, p. 257 tab. III fig. 8-9, Bull. Soc. Mycol. 1913, p. 542. — Tota pallide flavo-straminea 300 µ longa; perithecium magnum subovoideum 130-140 × 60, apice circa ostiolum bilabiatum nigro-maculatum abrupte contractum; receptaculum crassum, cella 1.-2. longiore quam latiore, 2. subpentagonali, cell. 3. subquadrata, 4. et 5. minoribus subquadratis parallele dispositis, 6. magis lata quam alta; cellula antheridifera nigra; appendicibus gracilibus medio dichotomice divisis; antheridiis 4-6 elongatis, ovato-subfusoideis; sporidiis fusoideis subcurvatis.

Hab. in Pogono chalceo, Ambleteuse Pas-de-Calais, Slack et Moidrey Manche (PASQUET) et Gallia litoralis mediterranea (PICARD).

62. Laboulbenia Polystichi Picard, Bull. Soc. Mycol. 1913, p. 540, tab. 4026 XXIX fig. 1. - Pallide flava fere hyalina, apice tantum perithecii obscuriore; perithecio ventricoso basi lato apicem versus sensim attenuato et tubulo latere interno nigro maculato terminato; appendice externa hyalina, recta nunquam ramosa, cum perithecium angulum acutum efformante; appendicibus internis duobus e cellula singula parva orientibus, conformibus e cellulis duobus efformatis; antheridiis subterminalibus, basi inflatis apice recto et partem inflatam subaequante terminatis; sporidiis uniseptatis, utrinque acutis, cellula basali duplo majori quam distali; receptaculo 190 µ longo; perithecio 130 μ longo 70 μ lato, sporidiis 60 μ long., appendice externa 255 μ, internis 75-80 μ; totus fungus e pede ad apicem perithecii 320 µ long.

Hab. ad helitras Polystichi connexi, Tournous Saone-et-Loire, Vendres prope Béziers Herault.

63. Laboulbenia philippina Thaxt., Laboulb. on Chrysomel., in Proc. 4027 Am. Ac. Arts Sc. 50., 1914, p. 31.

Hab. in elytris et artubus R h e m b o s t o affinis speciei, Manila Philipp. (BANKS). — Perith.  $85-100 \times 28-35$ ; sporidia  $50 \times 3,5$ ; receptac. 100-225 \* 38-42; appendices longiores 210-420; long. total. ad apicem perithec. 150-335 μ.

64. Laboulbenia Sapromyzae Thaxt., Proc. Amer. Acad. 1917, p. 717. 402

Hab. in alis Sapromyzae triseriatae et Sapromyzae sp., Los Amates Guatemala (KELLERMAN). — Sporidia  $50 \times 4$ ; perith.  $85 \cdot 105 \times 18 \cdot 22$ ; recept.  $70 \cdot 105 \times 18 \cdot 20$ , ramuli appendicis longiores  $90 \cdot 100 \mu$ ; long. tot. ad apicem perith.  $175 \cdot 225 \mu$ .

- 65. Laboulbenia Muscariae Thaxt., Proc. Amer. Acad. 1917, p. 718. 4029
  Hab. in alis sinist. Sapromyzae muscariae, Los Amates Guatemala (Kellerman). Sporidia 52 × 4; perith. 90-110 × 16-20; recept. 88-95 × 18; appendix ad apicem rami longioris 105; long. tot. ad apicem perithecii 200-230 μ.
- 66. Laboulbenia Siagonae Picard, Bull. Soc. Mycol. 1913, p. 545, t. 4030 XXIX fig. 5. Receptaculo basi angustiore, rigido, recto, 200 μ longo, cellula subbasali majori; infra flavido supra obscuriori perithecio late fusoideo 170-180 × 70-75, obscure brunneo, infra flavidulo v. subhyalino, apice hyalino sed infra colore nigro brunneo limitatis; cellulis perithecii spiraliter dispositis; appendicibus e cellulis duobus orientibus, exteriori uni-appendiculata interiori tetra-appendiculata, appendicibus 85-95 μ long. interioribus transverse 2-3 septatis; totus fungus 370-380 μ longo.

Hab. in Siagona (?rnfipedi), Algeria.

67. Laboulbenia Steleoceri Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 4031 p. 708. — Pallide sordideque brunnescenti, perithecio olivaceo-brunneo nigricanti; cellula basali parum curvata v. geniculata, infra hyalina et late rotundata; cellula insertionis utrinque latere libera, parum latiori quam longiori; translucenti olivacea; cellula basali appendicum interiorum parum latiori, duos ramos semel v. bis divisos et ad basim parvum numerum antheridiorum crassorum interpositos gerenti; perithecio subopaco, subconico, convergenti, extus leniter convexo, basi lata apice obtuso abrupte expanso, 50 × 22 infra 7,5 μ apice 9 μ; cellula I 30 × 15, II 70 × 16, III-IV 14 × 8, totus fungus 150 μ circ. long.

Hab. ad alam Steleoceri lepidi [Dipt.], Gambia River Africa occ. — Ceraiomyces typus pertinens.

68. Laboulbenia Picardii Maire, Bull. Soc. Hist. Nat. Afrique du Nord 4032 t. VII, 1916, p. 28, fig. 4. — Maior (500-560 μ alt.); perithecio ovoideo-oblongo, 115-120 ≈ 38-44, dilute melleo, apice in ostiolum concolor basi vix constrictum attenuato. Ascosporis infra <sup>1</sup>/<sub>4</sub> inferiorem uniseptatis, hyalinis, laevibus, utrinque acutis; receptaculo longissimo, gracillimo, 430-460 long. dilute melleo, verrucoso. Receptaculi cellulis omnibus elongatis, cellula 2. omnium longissima (250-280 ≈ 20-25). Cellulis 4. et 5. perithecio omnino connatis; cel-

4035

lula 5. subtriangulari-elongata; psallio (insertionis cellula) atrato, crassiusculo (4-5). Appendicum concolorum cellulis basalibus subaequalibus. Appendice externa valde divaricata, simplici v. ramosa; appendice interna perithecio breviore, ramosa, antheridifera; antheridiis lageniformibus rectis.

Hab. in elytris Tachyis bisulcati Nic., Larache Mauritania, Africa bor. (P. DE PEYERIMHOFF).

- 69. Laboulbenia manubriolata Thaxt., Proc. Amer. Acad. 1915, p. 44. 4038
   Hab. in variis partibus insecti T a c h y i i affinis, Samarang Java,
   Peradeniya Ceylon. Perith. 80 135 × 20-26; appendices longiores
   150; receptac. ad cellulam insertionis 120 300 × 30 40; long. tot.
   ad apicem perith. 160-400 μ.
- Laboulbenia asperata Thaxt., Proc. Amer. Acad. 1912, p. 201, Speg. 4034
   Lab. Arg. fig. 149.

Hab. in elytris Tachy is sp. Palermo et Tachy is bon ariens is, ins. Santiago, La Plata Argentina (SPEG.). — Perith.  $110 \approx 40$ ; appendix longior 250  $\mu$ ; receptac. 100-235, long. tot. ad apicem perith. 150-350  $\mu$ .

- Laboulbenia Veliae Thaxt., Proc. Amer. Acad. 1912, p. 195.
   Hab. in superf. thoracis V e liae platensis, Belgrano pr. Palermo Argent. Sporidia 50 × 7; perith. 125-130 × 24; recept. 235-260; cellula prima et secunda 200 × 18; appendices, inclusis ramis longioribus, 200; tot. long. ad apicem perithecii 350 μ.
- 72. Laboulbenia hemipteralis Thaxt., Proc. Amer. Acad. 1912, p. 194. 4036 Hab. in artubus et superf. infer. Veliae platensis, Belgrano pr. Palermo Argent. Perithecia 66 × 20-33; sporidia intra perith. 22 × 2,6; receptac. 85 × 23; appendices ad apices ramulorum longiorum 105 μ; tot. long. ad apicem perith. 100-120 μ.
- 73. Laboulbenia porrigens Thaxter, Proc. Amer. Ac. of Sc. 53., 1918, 4037 p. 705. Cellula basali breviuscula uno latere incurvata, plus v. minus inflata v. distorta; cellula basali receptaculi bene evoluta, obscure olivaceo-brunnea cum cellula basali appendicum externarum concolori; axe appendicum externarum e duobus cellulis efformato, superiori longiori et pallidiori, cellula basali appendicum interiorum minori quam cellula bas. append. externarum; cellula basali perithecii indistincte punctata; peritheciis bas. 95 × 28, sporidiis 35 × 3; appendicibus longioribus 140-157 μ, cellulis III-IV longioribus 40 × 15, brevioribus 25; totus fungus 175-210 μ long.

Hab. in superiori parte abdominis parvae Muscidae familiae ignotae [Dipt.], Kamerun Africa occ. — Proxima Lab. (Ceraiomyces)

Dahlii, sed appendicibus omnino diversis.

74. Laboulbenia fasciculata Peyr. — Syll. XIV p. 731. — \* Omophroni 4038 Speg., Laboulb. ital. I, in Redia p. 32 (1914) tab. 1 fig. 7. — Erostris, polymastiga, macromastiga, apsallia saepius gracilis et tenella diu hyalina, serius leniter et aequaliter fuscescens, cellula quinta quadripartita, paraphysibus subsimplicibus, praelongis, perithecio ad medium fere usque androsticho adnato, ostiolo obliquo, obtuso. — Altit. 300 350 μ; perith. 120-130 × 40; paraph. 200-500 μ longo.

Hab. in Omophrone limbato et O. variegato, in Italia.

75. Laboulbenia Leathsi Speg., Laboulb. Argent. in Anal. Mus. Nac. 4039 Buenos Aires XXIII (1912) p. 215 fig. 45. — Mediocris, 450 μ circ. alta, ferruginea, apsallia, brachymastiga; peritheciis ellipsoideis, 150 × 60, ad medium usque parte distali adnatis, ostiolo umbonato, exappendiculato, crassiusculo, nigro-torquato, ore subfimbriato; paraphysibus numerosis brevissimis.

Hab. in Gyrino Leathsi in Chile — L. Guerini Rob. proxima.

76. Laboulbenia Oodis Speg., Laboulb. Argent in Anal. Mus. Nac. 4040 Buenos Aires XXIII (1912) p. 225 fig. 55. — Mediocris, 350-800 μ usque alta, fusco-olivascens, apsallia, brachymastiga; receptaculo normali; perithecio ellipsoideo plus minusve elongato, 150-300 × 60-90, longitrorsum 4-lineato saepeque torto basi breviuscula parte distali adnato, ostiolo brevi, crasso, obtuso, exappendiculato, in juventute striato-pectinato; paraphysibus densis, brevibus, subfluxilibus.

Hab. in Oode (Stenocrepis) la evigato, La Plata, Argentina. — Habitu perithecii L. decipientis Thaxt. affinis.

77. Laboulbenia mesomorpha Speg., Laboulb. Arg. p. 606 f. 140. — 4041 Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, brachymastiga, parva, tota obscure castaneo-subpurpurascens, psallio tenui parum manifesto, cellula I pedicelliformi fere tota hyalina, II subtrapezoidi brevi, V majusculo cum IV supra III insidentibus, perithecio elliptico-ovato sursum attenuato, ostiolo rotundato, labiis obtusis hyalinis, vittis duabus longitudinalibus nigris subtortis ornato.

Hab. in elytris Bembidii convergentis, in ins. Santiago, La Plata. — Perith. 80-85 × 40-45, alt. tot. 170-185 μ.

78. Laboulbenia chirophora Speg., Lab. Arg. p 604, fig. 138. - Eula- 4042

boulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, brachymastiga; parva tota hyalina, paraphysopodio incoloro, axi primario brevissimo concolore, andropodio majusculo hyalino cellulas binas sustinente, ramulis quatuor dimeris achrois crassis obtusis coronato.

Hab. in elytris Tachys sp. ind., in ins. Santiago La Plata.—Perith. 65-75  $\approx$  35; alt. tot. 175-200  $\mu$ .

79. Laboulbenia paraguayensis Speg., Lab. Arg. p. 606, fig. 141. — Eu-4043 laboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, brachymastiga; subparva, obscure fusco-olivacea, cellulis I, II et V pallidioribus, andropodio paraphysopodioque corpus subglobosum inferne nigrum opacum efformantibus, paraphysibus breviusculis fuscis, peritheciis subellipticis grosse nigro-umbonatis, ostiolo pleurogeno, labiis vix pallidioribus, sporis saturate olivascentibus.

Hab. in elytris Calleidae amethystinae, San Pedro, Paraguay. — Perith. 90-110 × 38-43; alt. tot. 200-225 μ.

80. Laboulbenia asperula Speg., Laboulb. Argent. in Anal. Mus. Nac. 4044 Buenos Aires XXIII p. 197, fig. 25 (1912). — Tota fuscidula, fere opaca, parvula, 120·180 μ alta, melanopsallia, brachymastiga; peritheciis ovoideis, 80 × 40, ad medium fere usque parte distali adnatis, ostiolo cylindraceo, recto, obtuso, exappendiculato; cellulis secunda et tertia receptaculi dense minuteque papillosis.

Hab. in Trecho indeterm., La Plata, Argentina.

81. Laboulbenia macrocera Speg., Laboulb. Mus. ital., in Anal. Mus. 4045 Nac. Buenos Aires XXVI (1915) p. 474 fig. 19 — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, macromastiga, ceratotheca, infuscata, elongata, gracilis, 750-800 μ alta; cellula basali brevi, pellucida, praebasali brevissima turbinata opaca; androsticho et gynosticho adnatis, angustis, elongatis; perithecio praelongo, cylindraceo, recto, 400-450 × 45-50, plus minusve manifeste vittis nigris longitudinalibus 4 notato, apice abrupte angusteque umbonato, ostioli obliqui labio ventrali in appendice parum divaricata, recta, gracili, rigida, atra, opaca 100 × 10-15 producto; paraphysibus paucis, ramulosis, rigidulis, fragilibus.

Hab. in Carabide quodam (Miscelus? sp.), in ins. Sumatra (E. Modiciani) — L. Langsbergi Speg. proxima sed facile dignoscenda.

82. Laboulbenia Langsbergi Speg., Laboulb. Mus. ital., in Anal. Mus. 4046
Nac. Buenos Aires XXVI (1915) p. 473 fig. 18. — Haplocytia, psalliophora, podocarpa, melanochaeta, ceratotheca, fusca, majuscula,

400-450  $\mu$  alta; receptaculo abbreviato, clavulato; paraphysibus elongatis, simplicibus, nigris, 150 250  $\mu$ . altis; perithecio modice pedicellato (pedic. 50 60  $\mu$  alto), subcylindraceo, sursum leniter attenuato, 200  $\approx$  25, apice obtusissime crasseque umbonato, ostiolo truncato, labiis hyalinis, cirrulo gracili divaricato fuscescente ornato.

Hab. in Catascopi sp., in ins. Java (E. Langsberg). — L. imitantis Thaxt. proxima.

83. Laboulbenia Desgodii Speg., Laboulb. Mus. ital. in Anal. Mus. Nac. 4047 Buenos Aires XXVI (1915) p. 470 fig. 15. — Majuscula, 600 μ circ. alta, fusca, parum translucens ceratotheca; cellulis, prima levis leniterque obconoidea, secunda minute denseque papillulosa subcylindracea, pellucidis et elongatis; perithecio subconoideo, 175 × 60, apice rotundato subacutato ostioloque obtuso subhyalino vix bipapillato-appendiculato coronato, subopaco, basi breviter androsticho sursum nigrefacto adnato; paraphysibus numerosis, brevibus, 50 μ altis, subtorulosis.

Hab. in Desgodio distincto, lacu Pangani, Ushambara, Afr. or. (E. DABBENE). — L. Dineustis Thaxt. proxima, sed cellula praebasali asperula et appendicibus ostioli brevissimis distincta.

84. Laboulbenia Dineustis Thaxt. — Syll. XVI p. 684. — \* astrantica 4048 Speg., Laboulb. Mus. ital. in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 471 fig. 16. — Majuscula, 550 μ alta, clavulata, ceratotheca, fere tota fusco-opaca, perithecio crasso recto subconoideo, 200-225 × 75-80, receptaculo parum breviore.

Hab. in Dineuste micante, prope Cotonou, Astranti, Afr. occid.\*—neo-guineensis Speg., l. cit. p. 471 fig. 17.— Major, 800 μ alta, subcylindracea, subpallescens; perithecio dorso leniter curvulo, 200 × 30, quam receptaculum triplo breviore. A typo etiam toto habitu graciliore recedit. Hab. in Dineuste pectorali in flum. Pomamou, Nova Guinea (E. MODIGLIANI).

85. Laboulbenia borealis Speg. Laboulb. Mus. ital., in Anal. Mus. Nac. 4049 Buenos Aires, XXVI (1915) p. 468 fig. 13. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, brachymastiga, ceratotheca, 400-450 μ alta, tota atra opaca; cellula basali non geniculata, gracili, elongata, 105-125 × 20-30, vix pellucida, praebasali brevi, crassa; perithecio ovoideo-elongato, 150-200 × 75-90, atro, ostrolo nigro labio postico subcorniculato, antico abbreviato utrimque, appendice parva subcylindracea hyalina ornato.

Hab. in Gyrino boreali, Bezulian, Amer. septentr. — Affinis L. gyrinidarum Thaxt. et L. gyrinicolae Speg. sed statura,

longitudine cellulae basalis et brevitate praebasalis bene distincta.

86. Laboulbenia gyrinicola Speg., Laboulb. ital. I, in Redia X p. 34 4050 (1914) tab. II fig. 12.—Apsallia, brachymastiga, ceratotheca, tota obscure ochracea fere opaca 250 400 μ alta; cellulis prima et secunda subcylindraceis gracilibus, pallidis, pellucidis, ad septum primum eximie geniculatis et saepe leniter inflatis, perithecio conoideo, ad tertium inferum usque androsticho adnato, 100-150 × 50-75, ostiolo obtuso, crasso, hyalino, appendicibus duobus longiusculis curvulis, subtenuibus, 14-16 × 3-4, acutis, concoloribus ornato; paraphysibus 50-75 μ longis.

Hab. in Gyrino natatore, in Italia boreali.—\* stagnalis Speg., loc. cit., fig. 13.— A typo statura et crassitie conspicue minore satis riteque distincta. Altit.  $250-275 \mu$ ; perith.  $90-100 \times 25$ , append. ostiol.  $10 \times 3$ . — Hab. in Gyrino concinno, prope Porto Maurizio, et G. elongato prope Conegliano, Ital. bor.

87. Laboulbenia birmanica Speg., Laboulb. Mus. ital, in Anal. Mus. 4051 Nac. Buenos Aires XXVI (1915) p. 467 fig. 12. — Parvula, 175  $\mu$  alta, ceratotheca; cellulis pedicellaribus elongatis, subcylindraceis, septo primo vix incrassatis; androsticho maximo, infuscato, apice. truncato, in paraphysopodio permagno producto; gynosticho minimo; perithecio parvulo,  $40 \approx 25$ , ellipsoideo-conoideo, androsticho dorso longe adnato, apice minute ostiolato; appendicibus pusillis, vix perspicuis.

Hab. in Orechtochilo birmanico, Karim-geçu, Birmania (L. FEA). — Specimina juvenilia tantum visa.

88. Laboulbenia orechtochilicola Speg., Laboulb. Mus. ital., in Anal. 4052 Mus. Nac. Buenos Aires XXVI (1915) p. 477 fig. 21. — Haplocytia, hyalopsallia, apodotheca, ceratotheca, mediocris, geminata, altera subbacillari, abortiva. sterili, 200-250 μ alta, altera evoluta 300-400 μ alta; cellula basali elongata, leniter obconoidea, tortuosa; praebasali etiam elongatula, e cylindraceo subconoidea; androsticho truncato, nigrescente, paraphysopodio et antheridiopodio hyalinis, paraphysibus paucis concoloribus, basi nigro-annulatis donatis coronato; perithecio brevi, subconoideo, 80-100 × 25-30, apice bidentato, parte dimidia infera androsticho adnato.

Hab. in Orechtochilo Feae, Tenasserim, Birmania India or. (L. FEA).—L. crassipede et L. strangulatae Thaxt. affinis.

89. Laboulbenia crassipes Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 4058 Buenos Aires XXVI (1915) p. 469 fig. 14. — Mediocris, 325-350 μ alta, fusca, gracilis, ceratotheca; cellula basali brevi, crassa, cylindracea, curvula; praebasali elongata, gracilis, recta, utrimque abruptiuscule conoideo-ampliata; androsticho, brevi, apice oblique subtruncato, obsolete fusco-psalliato; paraphysopodio et antheridiopodio primo subhyalinis, serius atris, opacis; paraphysorum paucorum cellulis basilaribus conicis, nigris, opacis; peritheciis fuscis, subconoideis, 75 × 35, apice obtusis, hyalinis, vix bipapillatis.

Hab. in Orechtochilo lucido, Tenasserim, Indiae or. Birmania (L. FEA). — Affinis L. strangulatae Thaxt. sed bene distincta.

90. Labouthenia valida Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 4054 Buenos Aires XXVI (1915) p. 478 fig. 22. — Haplocytia, hyalopsallia, apodotheca, ceratotheca, majuscula, subclavulata, 500-550 μ alta, sursum valde infuscata et subopaca, deorsum pallida et pellucida; cellula basali subbrevi conoidea, praebasali cylindrica elongata, sexta sat turgida; perithecio pro ratione parvo, 125 × 50, conoideo-subelliptico, ostiolo vix pellucido, corniculis duolus concoloribus subunciniformibus ornato; androsticho percrasso, truncato; paraphysibus paucis, brevibus, fusculis, grumoso-constipatis.

Hab. in Orechtochilo valido Selebes (O. BECCARI).

91. Laboulbenia Modiglianii Speg., Laboulb. Mus. ital., in Anal Mus. 4055 Nac. Buenos Aires XXVI (1915) p. 475 fig. 20. — Haplocytia, melanopsallia, apodotheca, ceratotheca, 200-300 μ alta; receptaculo abbreviato, crasso; cellula basali obconica, pallida pellucida, praebasali orevissima infuscata; androsticho superne truncato-rotundato, psallio tenui ornato, paraphysopodio antheridiopodioque maximis, confluentibus, atratis coronato; perithecio subcylindraceo, 100-150 × 25-44, basi androsticho breviter adnato, superne abruptiuscule conoideo-attenuato, in umbone atro, dorso appendice nigra, crassa, incurvata, 30-35 × 7-9 aucto producto; paraphysibus graci-

Hab. in Thyreopteri sp., in ins. Sumatra (E. Modigliani).— L. fissae Thaxt. et L. Langsbergi Speg. cognata.

libus, 100 × 4-5, ramulosis, fuscis, facile deciduis.

92. Laboulbenia Texana Speg, Lab. Arg. 1917 p. 572, fig. 112 a (\* calo. 4056 theca, n.).— Eulaboulbenia, metalaboulbenia, pachymastiga melanopsallia, hemisyncarpa, orthotheca, cellulis I et II ad septum primum plus minusve geniculatis hyalinis, ceteris fumosis, perithecio cylindraceo-ellipsoideo superne conico-attenuato lineis 4 longitudinalibus cruciatis notato, ostiolo acutiusculo hyalino hypostomo lato nigro limitato, androsticho tumido subhemisphaerico divaricatulo, psallio lato crassiusculo axibus hyalinis, paraphysario percrasso,

antheridiophoro graciliore brevioreque, 6-7-meris, articulis dorso 1-paraphysatis.

Hab. in thorace Brachyni vicini, ins. Santiago, La Plata.—Perith. 125-135 × 38-40; alt. tot. 400 450.

93 Laboulbenia Castelnaui Speg., Laboulb. Mus. ital., in Anal. Mus. 4057 Nac. Buenos Aires XXVI (1915) p. 481 fig. 25. — Haplocytia, apodotheca, psalliophora, hemisynandrocarpa, major 700 μ alta, paliformis, erecta, recta, fusca; cellulis basali et praebasali cylindraceis, praelongis, 400-500 × 30-40; androsticho perithecio ad quartum superum usque coronato, cylindraceo-ellipsoideo, 150 × 50, apice umbonato; paraphysopodio et antheridiopodio fasciculatim connatis, vix fumosis; paraphysibus paucis, elongatis, cito caducis.

Hab. in Homalosomate nitidicolli, in Australia occid.

94. Laboulbenia Dercyli Thaxt. — Syll. XVI p. 684. — \* Eurysomae 4058
Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. Buenos Aires, XXVI (1915) p. 459 fig 5. — A typo recedit statura conspicue minore coloreque omnium partium pallidiore, alt. 200-250 μ; perith. 75 × 30.

Hab. in Eurysomate pyroptera, Uruçù, Brasilia (SILVESTRI) — \* Burmeisteri Speg., loc. cit. p. 460 fig. 6. — A typo et a varietate praecedente differt elongatione et gracilitate receptaculi perithecioque magis producto et fere a basi libero, nec non colore omnium partium obscuriore, peculiari distincta. Alt. 400-500  $\mu$ ; perith. 150 × 40-50. — Hab. in Eurysomate Burmeisteri, Corumbà, Brasilia (SILVESTRI).

95. Lahoulbenia pachystoma Speg., Lab. Arg. p. 587, fig. 124, L. Guerinii Speg., Contr. Lab. Arg. n. 38, fig. 44 (non Thaxt.) — Eulaboulbenia, hyalopsallia, hemisyncarpa, subrufescenti-olivacea, cellulis
I et II pedicelliformibus pallidis ad septum 1. incrassatis obscurioribusque cellulis ceteris receptaculi incospicuis; perithecio puncto
majusculo nigro excentrice ornato, deorsum androsticho adnato,
sursum leniter attenuato, apice truncato-subrotundato, ostioli vix
hyantis labiis subhyalinis, hypostomo nigrescente; psallio plane
nullo, paraphysibus numerosis brevibus crassis inferne olivaceis
laxe pauceque subnigro-annulatis; androstichi gynostichi atque perithecii parte infera obsolete transverse ruguloso-granulosa.

Hab. in elytrorum margine G y r i n i d e i sp. indet., Misiones.—Perith.  $65.95 \times 30.55$ ; alt. tot. 180.250.

96. Laboulbenia brachynicola Speg., Lab. Arg. p. 582, fig. 117. — Eu-4060 laboulbenia, hyalopsallia, tota mellea et tumida, brevis, crassa, pa-

rietibus omnibus incrassatis, perithecio fere ad basim usque libero ellipsoideo saepe lineis dextrorsis ornato modice crasseque fusco-umbonato, ostioli vix hiantis labiis subinaequalibus rotundatis, paraphysopodio stramineo quam andropodio concolore duplo majore, paraphysibus plus minusve numerosis subbrevibus saepius valide deorsum incurvatis.

Hab. in elytris Brachyni immarginati, La Plata. — Perith. 135-160 × 90-100; alt. tot. 250-350.

97. Laboulbenia leptopus Speg., Laboulb. Arg. p. 586 fig. 122. — L. ro- 4061 tundata Speg., Contr. Lab. Arg. n. 58 f. 64 (non Thaxt.). — Eulaboulbenia, hyalopsallia, parva, subrufescenti-olivacea, cellula basali cylindracea elongata subhyalina, praebasali subpentagona brevi olivascente, III, IV et VI normalibus, VII plane deficiente, V semilunari obliqua, androsticho perithecii dorso adnato, perithecio ovato, crasso, superne attenuato-conico obtuso, ostiolo labiis hiantibus rotundatis hyalinis, hypostomo nigro; psallio atrophico indefinito nigrescente, paraphysibus numerosis brevibus inferne subtorulosis olivascentibus superne filiformibus hyalinis.

Hab. in elytris Gyrinidei sp. ind., Misiones. — Perith. 75-90 × 30-35; alt. tot. 175-200.

98. Laboulbenia Dysonichae Speg.; l. cit., fig. 16 (Laboulbeniella). — 4062 Fusca, melanopsallia, oligomastiga, 150-200  $\mu$  alta; peritheciis elliptico-subcylindraceis, 75-100  $\times$  25-28, ostiolo bilabiato plus minusve nigrefacto.

Hab. in Dysonicha conjuncta et D. bicarinata, La Plata, Argentina.

99. Laboulbenia tucumanensis Speg., Laboulb. Argent. in Anal. Mus. 4063 Nac. Buenos Aires XXIII p. 190 (1912) fig. 17 (Laboulbeniella.) — Fusca, melanopsallia, oligomastiga, 180-210 μ alta; peritheciis late ellipsoideis, 120 × 60, ostiolo bilobo, nigro-annulato.

Hab. in Dysonicha copulata, Tucuman, Amer. austr.—A L. Dysonichae Speg. cui affinis, differt praecipue ob perithecia crassiora.

100. Laboulbenia Homophoëtae Speg., Laboulb. Argent. in Anal. Mus. 4064 Nac. Buenos Aires XXIII p. 191 (1912) fig. 18 (Laboulbeniella) — Fusca, melanopsallia, melanomastiga, 200-250 μ alta; cellula receptaculi basali elongata, caeteris valde abbreviatis; peritheciis subfusoideis, atris, 90-120 \* 30-35, non vel vix bilabiatis, longitrorsum bilineatis; paraphysibus ramosis, divaricatis, fuscis, ramulo interno ascillari biantheridiato.

Hab. in Homophoëta 8-guttata, Minas Geraes in Bra-

silia. - Species pulcherrima eximie distincta.

101. Laboulbenia endogaea Picard, Bull. Scient. France Belgique t. 50., 4065 1916-1917, p. 455, pl. VI fig. 6 (an 5 ?). — (Laboulbeniella). Brunneo-olivacea, basi receptaculi et appendicibus hyalinis; perithecio subcylindraceo, 50-55 μ longo, apicem versus contracto; ostiolo apicali; receptaculo recto e basi ad apicem sensim incrassato; cellula 3. 4. et 5. cellulam unicam parvam subconoideam efformantibus; appendice interna fertili, certe decidua, non visa; externa unica non ramosa, perithecio duplo longiore, hyalina; cellulis appendicum ad septa contractulis omnibus apicem versus sensim majoribus inflatis; appendice 75-100 μ longa. Totus fungus 130-135 μ longo.

Hab. in Reicheia usslaubi var. sardoa (Carabidae), Sardinia Italia (CH. FAGNIER).

102. Laboulbenia Bergii Speg., Lab. Arg. p. 565, fig. 102. — Zigola 4066 boulbenia, haplocytia, laboulbeniella, ceratotheca tota plus minusve fumoso subtestacea, cellula basali obconica, praebasali elliptico-subglobosa, androsticho et gynosticho irregularibus 1-, rarius 2-, me ris, perithecio elongato ellipsoideo, saepius obscuriore, lineis verticalibus plus minusve distinctis notato, apice breviter umbonato, umbone truncato-ostiolato, labio ventrali lineari-spathulato recto erectoque ornato; psallio angusto nigro, paraphysibus paucis subtenuibus deorsum nodulosis nigrescentibus saepius subcircinatis donato.

Hab. in abdominis margine Dysonichae conjunctae, Buenos Aires (C. Berg). — Perith. tot. 110-125\*30-35; alt. tot.  $200-350~\mu$ .

103. Laboulbenia Systenae Speg., Lab. Argent. p. 568, fig. 107. — Zi-4067 golaboulbenia, haplocytia, laboulbeniella, apsallia, tota plus minusve olivascens, paraphysopodio nigro opaco, paraphysum parte infera olivacea dorso nigro-marginata parte supera subhyalina, peritheciis omnino liberis cylindraceo-ellipticis, lineis 4-nigris tenuibus dextrorsis percursis, apice abrupte contracto-umbonatis, hypostomo nigro, labiis ostiolaribus prominulis hyalinis.

Hab. in elytris Systenae testaceo virtatae, Sta Çatalina B. A., Argent. — Perith. 80-85 × 30 32.

104. Laboulbenia palustris Speg., Lab. Arg. p. 562, fig. 100. — Zigo- 4068 laboulbenia, haplocytia, laboulbeniopsis, melanopsalia, apodotheca, malacochaeta, brachymastiga, parva, perithecio cum receptaculo breviato angulum rectum efficiente, ovato, pallido ad ventrem fuscorufescente, umbone crasso b.evi obtuso nigro, ostioli labiis hyali-

nis coronato; androsticho majusculo tumidulo, andropodio et paraphysopodio subglobosis saepe subfumosis, cellulas 1 v. 2 basilares axium nigriseptatas ferentibus, paraphysibus paucis crassiusculis oligomeris hyalinis.

Hab. in thorace Carabidisp. pusillae (Tachys corruscans?), La Plata. — Perith. 75-80 × 45-50; alt. tot. 100-125 μ.

105. Laboulbenia unicornis Speg., Lab. Arg. p. 563, fig. 101.—Zigolaboul- 4069 benia, haplocytia, laboulbeniopsis, tota chlorina, cellula basali subhyalina obeonica, praebasali longiore crassioreque, tertia quarta quintaque androstichum subglobosum efficientibus, sexta quadrangulari subnormali, septima plane deficiente; psallio angusto stricto atro-olivaceo pellucido; paraphysopodio atque andropodio parvis versiformibus, paraphysibus saepius ternis dorso arcuato deflexis, antheridio nuico solitario ad articulum secundum antheridialem; perithecio irregulariter lageniformi, parte sporifera subgloboso-inflata, superne abrupte contracto in umbone conico crasso, ostiolo laterali, labio ventrali supero obtuse rotundato, infero in cornu obliquo dorsali producto.

Hab. in therace Anthocomi sp., Sta Catalina B. A., Argent. — Perith.  $65.75 \times 40.45$ ; alt. tot. 140-175.

106. Laboulbenia Agrae Speg., Laboulb. Arg. p. 597, fig. 128. — Eu-4070 laboulbenia, melanopsallia, apodotheca, eleutherocarpa, malacochaeta, macromastiga, majuscula, obscure olivacea, dorso androstichi perithecioque parte media atro-olivaceis, margine cellularum inferiorum paraphysum hypostomoque nigris opacis, perithecio ab ima basi libero, elliptico umbone crasso brevi subtruncato, labiis ostioli parvi vix hyalinis coronato, lineis 4 longitudinalibus dextrorsis crassiusculis nigris notato.

Hab. in elytris A g r a e sp. indeterm., Ignazù Misiones, Argent. — Perith. 150-180  $\times$  65-70; alt. tot. 300-400  $\mu$ .

197. Laboulbenia heroica Speg., Laboulb. ital. I, in Redia X p. 60 (1914) 4071 tab. VIII fig. 56. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, macromastiga, mediocris, 150-275 μ alta, inferne pallida superne infuscata, septis tertio et septimo remotis; perithecio atro, 75-100 ≈ 35-45, androsticho ad medium fere usque connato, ostiolo sat umbonato, obtuso, vix obliquato, non vel vix centro hyalino; paraphysopodio et andropodio majusculis, atratis; paraphysibus 250 μ circ. altis.

Hab. in Anisodactylo heroe in Sardinia. — Affinis videtur L. melanariae Thaxt. et L. ancipiti Peyr.

108. Laboulbenia subopaca Speg., Lab. Arg. p. 657, fig. 183. — Eula-4072 boulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, macromastiga, subopace rufo-fuliginea, cellula basali subhyalina cylindraceo-turbinata, praebasali obscuriore vix longiore, androsticho gynostichoque normalibus subopacis, perithecio cylindraceo-ellipsoideo lineis nigris tenuibus 4 longitudinalibus dextrorsis ornato superne attenuato-rotundato grosseque umbonato, hypostomo nigro, ostiolo pallidiore rotundato, andropodio, paraphysopodio nec non cellulis duabus v. tribus inferis axium torulosis nigris, paraphysibus tenuibus brevibus fuscis.

Hab. in eytris Perenoscelis undati, Misiones Argent. — Perith. 85-115  $\approx$  36.40; alt. tot. 190-215  $\mu$ .

109. Laboulbenia hyalopus Speg., Laboulb. Mus. ital., in Anal. Mus. 4073 Nac. Buenos Aires XXVI (1915) p. 503, fig. 44. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, polymastiga, macromastiga, minuta, 200 μ alta, ad maturitatem tota atra opaca; cellula basali excepta semper hyalina; androsticho superne oblique truncato psallio constricto; paraphysopodio antheridiopodioque majusculis, nec non articulis inferis paraphysarum plus minusve nigrefactis; perithecio ellipsoideo-conoideo, 100 × 40, opaco, breviter deorsum androsticho adnato, umbone crasso subbrevi obtusoque, ostiolo subdorsali, labiis vix pallescentibus; paraphysibus filiformibus 150 × 5-10.

Hab. in Brachyno equestri, Arramba, Scioa (ANTI-NORI). — A caeteris speciebus brachynicolis perfecte distincta.

110. Laboulbenia pachydermica Speg., Lab. Arg. p. 656, fig. 182. — 4074 Eulaboulbenia, melanopsallia, apodotheca hemisyncarpa, malacochaeta, macromastiga majuscula, tota tumida, subhyalina, plagulis perithecii olivascentibus suffusis, parietibus totius corporis percrassis, paraphysopodio quam andropodio duplo majore, paraphysibus parum numerosis elongatis crassis dorsalibus leniter olivascentibus.

Hab. in elytris Feroniae lucidae, Santiago Chile. — Perith. 85-100 \* 55-60; alt. tot. 250-300  $\mu$ .

111. Laboulbenia montevidensis Speg., Laboulb. Arg. p. 653 fig. 180, 4075 L. Brachyni fm. elongata Thaxt., L. Rougeti Speg., Contr. Lab. Arg. n. 59 f. 65 (non Mont. et Rob.). — Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, macromastiga, tota mellea, erecta, robusta, receptaculo rugulis transversis saepe notato, perithecio ellipsoideo-cylindraceo recto saepe lineis 4 longitudinalibus dextrorsis ornato, paraphysopodio andropodio atque paraphy-

sibus a basi liberis totis pallidis.

Hab. frequens in Brachyno nigro, Br. vicino, Montevideo, in Brachyno vicino, Br. nigripede, Sta Catalina B. A. et La Plata. — Perith. 150-175  $\times$  50 55; alt. tot. 350-500  $\mu$ .

112. Laboulbenia Aspidoglossae Thaxt.— Syll. XIV p. 730.— \*L. mat-4076 togrossensis Speg., Lab. Arg. p. 646, fig. 173 b. — Eulaboulbenia melanopsallia, apodotheca, hemisyncarpa, malaccchaeta, macromastiga; septo 1., androsticho gynostichoque fumosis, perithecio infuscato sed pellucido, andropodio ac paraphysopodio parum distinctis, cellulis basilaribus axium submajusculis globosis septis nigris limitatis, paraphysibus numerosis filiformibus tenuibus.

Hab. in elytris Aspidoglossae crenatae, Mattogrosso Brasiliae et La Plata. -- Perith. 110-125 × 40-45; alt. tot. 375-425 μ.

113. Laboulbenia fuscula Speg., Laboulb. Arg. p. 651, fig. 178. — Eu-4077 laboulbenia, melanopsallia apodotheca, hemisyncarpa, malacochaeta, macromastiga, mediocris, recta v. deorsum leniter arcuata, obscure fusco olivacea, cellulis II, III, IV et VI saturatioribus minute nigro-punctatis, apice dorsali cellulae IV sat producto, perithecio, quarto infero androsticho aduato, e cylindraceo fusoideo modice obtuseque umbonato, hypostomo dorso nigrefacto ventre pallido, paraphysopodio tumidulo fumoso quam andropodio duplo majore, axi paraphysum primario margine dorsali nigro, paraphysibus tenuibus subhyalinis antrorsum arcuatis, per aetatem fragilibus caducis.

Hab. in elytris Argutoridii uruguayci, Montevideo—Perith. 90-100  $\approx$  28-30; alt. tot. 235-250  $\mu$ .

114. Laboulbenia afra Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 4078 Buenos Aires XXVI (1915) p. 499 fig. 41.—Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, polymastiga, macromastiga, saepius valde infuscata, 300-350 μ alta; perithecio ovato-elongato, recto, 125 ≈ 50, fere ad basim usque libero, sensim crasseque attenuato-umbonato, ostiolo obtuse rotundato vix obliquo, labiis decoloratis; androsticho gynosticho omnino adnato, superne obliquo, psallio majusculo crasso coronato; paraphysopodio toto nigrificato dense flabellato-ramoso, antheridiopodio concolore; paraphysibus densis, erectis, rigidulis, infuscatis, 150-175 μ altis; antheridiis majusculis pluribus; cellula basali dimidia infera pallescente, ceterum atra ut praebasali.

. Hab. in Brachyno 4-punctato, Bolama, Guinea lu-

sitanica (L. FEA). - A L. bolamensi Speg. et L. hyalopode Speg., cui subaffinis, habitu facile distinguenda.

115. Laboulbenia bolamensis Speg., Laboulb. Mus. ital., in Anal, Mus. 4079 Nac. Buenos Aires XXVI (1915) p. 501 fig. 43. - Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta; polymastiga, macromastiga, grandiuscula, 400-500 a alta, modice infuscata; perithecio subcylindraceo, 150-175 > 50 55, usque ad basim fere libero, apice subabrupte crasseque conico-umbonato, ostiolo recto subtruncato-rotundato, labiis decoloratis, parietibus lineis 4 longitudina. libus clathratis ornatis; androsticho gynosticho omnino adnato. superne obliquo, psallio majusculo crasso coronato; paraphysopodio dorso plus minusve nigrifacto; antheridiopodio etiam sursum atrato; paraphysibus numerosis, fasciculatis, perithecium vix superantibus, 100-150 µ longis, plus minusve infuscatis; cellula praebasali semper brevi et tota vel magna pro parte nigra, basali autem plus minusve elongata sed saepius brevi et pallida.

Hab. in Brachyni sp. ind. (aff. B. equestri), Bolama, Guinea lusitan. (L. FEA). - L. afrae Speg. affinis sed bene distincta.

116. Laboulbenia rigidula Speg., Laboulb. Arg. p. 600 fig. 132. - Eu- 4080 laboulbenia, melanopsallia, apodotheca, eleutherocarpa, tota e fuscoolivascente nigrescens, mediocris, elongata, angusta, vix arcuata, rigidula, cellulis III et IV parallelis subaequilongis, IV plus minusve nigrescente dorso prominulo-subgibbosa, V majuscula apicem internum tertiae attingente, septima parva saepius subatrophica, perithecio ad basim usque libero subfusoideo atro, per aetatem subopaco sursum in umbone ostiolari hyalino, hypostomo nigro, obtuso producto, cellulis inferis paraphysum majusculis subtorulosis plus minusve infuscato-nigrescentibus, paraphysibus fumosis.

Hab. in elytris Zygogrammae aureilineae, Misiones Argent. (C. BERG). — Perith. 99-100 \* 28-30; alt. tot. 250-275 μ. 117. Laboulbenia Rougeti Robin — Syll. VIII p. 910 — \*L. Callisti Speg. 4081 Laboulb. ital. I, in Redia X p. 64 (1914) tab. IX fig. 60, et in Anal. Mus. Nac. Buenos Aires, XXVI (1915) p. 497. - Macromastiga. Statura conspicue minore, gracilitate omnium partium, receptaculo elongato, ostiolo crassissimo obtusoque, axi paraphysario primario toto nigrificato a typo recedit. Alt. 225-275  $\mu$ , perith. 75-85  $\approx$  25-35, paraph. 200-250 µ long.

Hab. in Callisto lunulato nec non in Platyno dorsali in Italia, et in Europhilo dorsali ex Morea.

—\*L. chlaeniicola Speg., l. cit. p. 65, tab. IX fig. 61.— Differt receptaculo elongato perithecio duplo triplove longiore, paraphysopodio e cellulis basalibus exeos primarii non vel vix nigrifactis. Alt. 400-500  $\mu$ , perith. 100  $\approx$  50, paraph. 300-350  $\mu$  alt.

Hab. in Chlaenio nitidulo, prope Romam, Ital. centr.

\* L. fuscescens Speg., l. cit. p. 65, tab. IX fig. 62.— Statura minore, 4083 colore saturatiore castaneo-atro et perithecio magis libero distincta.
 Alt. 200-225 μ; perith. 110 ≈ 50, paraph. 100-150 μ alt.

Hab. in Agono Mülleri, prope Romam Ital. centr.

- \* L. sicula Speg., Laboulb. ital. II, in Anal. Mus. Nac. Buenos Aires, 4084 XXVII p. 61 fig. 26. — Erecta, 350-400 μ alta; receptaculo pallido, pellucido, conoideo; androsticho atque gynosticho normalibus, connatis, inferne subpurpureo-fuscis, superne atris opacis; perithecio cylindraceo-conoideo, 150-175 × 65-70, grosse umbonato, oblique truncato-ostiolato, nigro; paraphysopodio et axi paraphysario primario infuscato, antheridiopodio ac ejusdem paraphysibus subhyalinis.

Hab. in Brachyno bellicoso, Trapani, Sicilia et prope Tunisi, Afr. bor.

118. Laboulbenia Bolamae Speg., Laboulb. Mus. ital., in Anal. Mus. 4085 Nac. Buenos Aires XXVI (1913) p. 500 fig. 42. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, macromastiga, fusco-mellea, mediocris, 250-300  $\mu$  alta; cellula quarta seu supera androstichi superne eximie truncata, angulo dorsali recto acuto prominulo; perithecio pro ratione majusculo, subcylindraceo, 100  $\times$  30, grosse umbonato-ostiolato, hypostomo atro, ostiolo obliquo, labiis subhyalinis, appendice trichogynica persistente longiuscula; paraphysibus filiformibus sat copiosis, 250-350  $\mu$  longis.

Hab. in Feronideo majusculo brunneo indet., Bolama, Guinea lusitan. (L. FEA). -- Ad typum L. flagellatae Peyr. pluribus characteribus vergit sed androsticho eximie truncato etc. distincta.

119. Laboulbenia Peiroleri Speg., Laboulb. ital. I, in Redia X p. 61 4086 (1914) tab. VIII fig. 57. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, manomastiga, macromastiga, mediocris, 325-350 μ alta, fusca, receptaculo modice conico, pallido; perithecio atro opaco, 150-175 × 60-70, deorsum breviter androsticho adnato, apice ostiolo obtusissimo crassissimo leniter obliquo donato; paraphysibus paucis, flaccidis, subcrassiusculis, 300-350 μ longis, s basi sursum leniter sensim incrassatis, apice obtuse rotundatis atque plus minusve arcuatis, rufescentibus.

Hab. in Platyno (Anchomeno) Peiroleri, Val

Pesio, Pedem. Ital. bor.—\*L. helvetica Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 496 fig. 38.—Statura duplo majore, oligomastiga, 400-500  $\mu$ , paraphysibusque minus incrassatis et minus flaccidis a typo recedit.—Perith.  $200 \times 70$ ; paraph.  $400\text{-}600 \times 25$ .—Hab. in Anchomeno depresso, ex alpibus Helvetiae.

120. Laboulbenia philonticola Speg., Laboulb. ital. I, in Redia X p. 61 4087 (1914) tab. VIII fig. 58. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, macromastiga, androsticho basi perithecii breviter adnato, paraphysopodio et andropodio mediocribus, subglobosis, ostiolo perithecii parum prominulo, obliquo, subbilabiato, paraphysibus dense breviterque ramosis, externo plus minusve infuscato, cellula praebasali percrassa tumida. Alt. 300-375 μ, perith. 100 > 50, paraph major. 100-150 μ altis.

Hab. in Philontho sp., Levico, Trentino. — Affinis L. Rougeti Rob. sed colore saturatione aliisque characteribus distincta.

121. Laboulbenia Stenolophi Speg., Laboulb. ital. I, in Redia X p. 65 4088 (1914) tab. IX fig. 63, et in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 505, XXVII (1915) p. 61. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, macromastiga, tota melleosubhyalina, brevis, crassa, 275-350 μ alta, perithecio 100-125 × 60, ostiolo umbonato obliquo, hypostomo nigro, paraphysopodio crasso globoso; paraphysibus crassis, fumosis, majoribus 400 μ usque longis.

Hab. in Stenolopho tentono, prope Coneglanum, Venet., prope Bononiam Ital. bor., nec non prope Bagnères, Gallia.—Affinis L. Giardi Cép. et Pic. et L. polyphayae Thaxt.

122. Laboulbenia obesula Speg., Laboulb. Arg. p. 655 fig. 181, L. olivacea Speg., Contr. Lab. Arg. n. 48 fig. 54 (non Thaxt.). — Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa malacochaeta,
macromastiga, tota olivacea, hine inde irregulariter obscurior saepeque opaca, partibus omnibus ad maturitatem plus minusve tumidulis, peritheciis ad medium fere usque androsticho adnatis cellula 4. dorso sub psallio conspicue angulato-gibbosula, andropodio
pallido parve, paraphysopodio nec non cellulis una v. duabus basilaribus axeos majusculis subglobosis pallidis, paraphysibus crassiuscule filiformibus quandoque pallidis quandoque fusco-olivaceis.

Hab. in elytris Carabinei sp. (Lebiae?), Tucuman Argent. — Perith. 100-150 × 50-70; alt. tot. 300-500 μ.

123. Laboulbenia vulgaris Peyr. - Syll. VIII p. 912 -\* L. oncogona Speg., 4090

Laboulb. ital. I, in Redia X p. 43 (1914) tab. III fig. 27.— Monomastiga. A typo recedit cellulis basali et praebasali, medio eximie coarctata, subaequilongis, septo primo valde tumefacto fumosoque, ceteris normalibus sed (quinta praecipue) infuscatis, perithecio ad medium fere usque androsticho adnato, deorsum fuscescente subopaco sursum pallidiore, attenuato ac in umbone bene evoluto, crasso, oblique ostiolato producto; andropodio septo nigro crasso coronato. — Alt. 220-250  $\mu$ ; perith.  $75 \times 32$ ; paraph.  $150~\mu$  alta.

Hab. in Bembidio quadriguttato, prope Romam, Ital. centr. — Affinis L. subterraneae Thaxt. et L. pedicellatae Thaxt.

-- \* L. scelisca Speg., l. cit. p. 44 tab. IV fig. 28. — A typo recedit bre-4091 vitate et crassitudine corporis, cellulis basali et praebasali pallidis, ceteris atris opacis, perithecio late elliptico, medium fere usque androsticho adnato, subnigro, opaco, umbone non vel vix pallidiore et pellucido coronato, paraphyse solitaria simplici, articulis cuboideis vel subglobosis efformata, antheridiophoro unicellulari. — Alt. 150-170 μ; perith. 75 × 35.

Hab. in Bembidii sp. plur., in Italia.

- \* L. trechiphila Speg., l. cit. p. 45, tab. IV fig. 29.—A typo distingui- 4092 tur cellula praebasali superne sub tertia nonnihil producta, androsticho perithecio longiuscule adnato, partibus omnibus pallidis, melleis vel fumosis. — Alt. 185-200 μ; perith. 80 × 35.

Hab. in Trecho binotato, prope Florentiam Ital. centr.

- \* L. communis Speg., Laboulb. ital. II, in Anal. Mus. Nac. Buenos 4093 Aires XXVII (1915) p. 63 fig. 28. — Eulaboulbenia, monomastiga. A typo recedit stipite cylindraceo, ad septum primum vix constricto, non infuscato, cellulis caeteris receptaculi leniter obsoleteque transverse rugulosis et praecipue paraphyse percrasso, vix apice breviter parceque appendiculato

Hab. in Bembidii sp. indet., prope Genuam, Ital. bor.

- \* L. subcommunis Speg., loc. cit. p. 63. — A L. communi recedit cel- 4094 lula basali parva hyalina, praebasali majuscula turbinata, ramis apicalibus paraphyseos monomeris percrassis, colore obscuriore, subnigro.

Hab. in Bembidii sp. ind., prope Genuam, Ital. bor.

- \* L. subvulgaris Speg., l. cit. p. 64 fig. 29. — A typo recedit praecipue 4095 paraphysopodio maximo, elliptico-subgloboso, 30 × 20-25, medio saepius leniter coarctatulo, paraphyse fere nullo, ad cellulam tantum reducto.

Hab. in Bembidii sp., prope Coneglanum, Ven., It. bor. — An species distincta?

- \* L. trivialis Speg., l. cit. p. 64 fig. 30. — A typo recedit pedicello medio valide tumefacto, cellula praebasali nec non illis androstichi et gynostichi eximie transverse nigro-maculatis, paraphysopodio mediocri subgloboso in paraphyse brevissimo parce crasseque ramoso producto.

Hab. in Be m bidii sp., prope Imola, Ital. bor.

-\*L. suboncogona Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. Buenos 4097 Aires XXVI (1925) p. 489 fig. 32. — A L. oncogona Speg. recedit articulatione septi primi minus turgida et praecipue constrictione ejusdem deficentia, perithecioque breviori, longius androsticho adnato. Alt. 250-275 μ; perith. 90 × 35.

Hab. in Bembidio la evigato, Columbus, Texas. America bor.

124. Laboulbenia polyphaga Thaxt.— Syll. XIV p. 734.— \* L. phaeo. 4098 soma Speg., Laboulb. Arg. p. 616, fig. 147 b.— Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, monomastiga, cellula I subhyalina, III pallide fumoso-testacea, gynosticho androstichoque obscure testaceo-fuligineis laxe v. plus minusve dense asperulo-punctulatis, perithecio atro-testaceo laevi subopaco saepius dorso sub hypostomo pallidiore, paraphyse crassa elongata hyalina.

 $\it Hab.$  in toto corpore Carabidorum quorumdam (Argutor, Argutoridius, Pterostichus etc.), Montevideo, Sta Catalina B. A., La Plata. — Perith. 80-90  $\times$  32-35; recept. 115-125  $\times$  40-45; alt. tot. 200-210  $\mu.$ —\* L. calathicola Speg., Laboulb. ital. I, Redia X p. 39 (1914) tab. III, fig. 20.— Monomastiga. A typo recedit colore infuscato, praecipue ad perithecium, umbone ostiolari dorso minus tumido, hypostomo toto nigro, ostiolo valde obliquo. Altit. 175-250  $\mu$ ; perith. 85-110  $\times$  30-50; paraph. 200-250  $\mu$  alta. — L. vulgari proxima.

Hab. in Calatho microptero, prope Romam, C. melanocephali et C. fuscipede, in Veneto.

125. Laboulbenia Bergiana Speg., Laboulb. Arg. p. 609, fig. 143. — 4099 Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, monomastiga; tota pallidissime mellea, psallio hypostomoque nigris exceptis; cellula VII receptaculi trigonosegmentiformi parva; cellulis IV et V tumidis a perithecio elliptico-ovato, longitudinaliter 4-vittato inclinato, obsolete umbonato-ostiolato divergentibus; paraphyse subhyalina solitaria praelonga deorsum subtorulosa, an-

dropodio achroo monoantheridiato.

Hab. in toto corpore Phinophili Bergi, La Plata.—Perith.  $125.46 \times 60.65$ ; recept.  $200-230 \times 65.75$ ; alt. tot. 300-325.

126. Laboulbenia cymindicola Speg., Laboulb. ital. I, in Redia X p. 37 4100 (1914) tab. III fig. 17. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, monomastiga, 225-250 μ alta, colore fumoso-rubiginoso, protoplasmate grumoso-granuloso, cellulis basali et praebasali elongatis, subcylindraceis, pallidis; androsticho brevissimo infuscato; perithecio turgidulo, subnigrescente, 100-110 × 45-50, crasse breviterque umbonato, ostiolo valde obliquo, hypostomo atro, labiis subhyalinis; paraphyse solitaria simplici, crassiuscula, 150-175 μ alta; ramulis antheridialibus numerosis, abbreviatis, gracilibus, penicillatim constipatis.

Hab. in Cyminde coadunata, prope Romam It. centr.—Inter. L. polyphaga Thaxt. et L. Rougeti Rob. media.

127. Laboulbenia lathropinicola Speg., Lab. Arg. p. 613, fig. 145. — Eu-4101 laboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, monomastiga; tota olivacea, cellulis I et II subaequilongis pallidioribus, androsticho apice fuscescente breviter libero deorsum perithecii basi adnato, paraphyse solitaria crassiuscula longiusculaque subhyalina, andropodio brevi simplice biantheridiato, perithecio inclinato superne longe nigro-umbonato, ostioli labiis tumidis rotundatis modice hiantibus.

Hab. in elytris Lathropini majoris, Santa Fè Arg.—Perith. 125-130 × 50-55, alt. tot. 290-310.

128. Laboulbenia pulchella Speg., Laboulben. ital. I, in Redia X p. 39 4102 (1914) tab. III fig. 21 et in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 488. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, monomastiga, parvula, 125 150 μ alta, fuscescens, abbreviata, latiuscula, obconica; cellulis secunda, tertia et quarta secus marginem dorsalem plus minusve infuscatis; perithecio breviter ellipsoideo-conico, 60-65 × 30-35, subpallido, ostiolo bene evoluto, obliquo, labio supero nigrifacto, paraphysum axi primario simplice, elongato, crassiusculo, articulato, 75-100 μ long., vix fumoso, axi antheridiophoro brevissimo, dense tenuiterque penicillatim ramosulo.

Hab. in Dromio lineari prope Neapolim, It. merid. nec non in Dromio sigma et D. quadrinotato, in Germania.—\*L. major Speg., loc. cit. p. 40, tab. III fig. 22.— A typo differt magnitudinem omnium partium majore (alt. 160-175 μ, perith.

75 × 40, paraph. 125 μ alta) et colore magis infuscato.

Hab. in Metableto (Blechro) foveolato in Tyrolia. 129. Laboulbenia Blanchardi C. Cépède, Archiv. de Parasitologie t. 16., 4103 1913, p. 373, tab. VI (diagn. nulla).

Hab. in Carabide Demetrias unipunctata, prope Wimereux, Pas-de-Calais, Gallia. — Lab. Casnoniae Thaxt. proxima. — Sec. Picard (Bull. Scient. France Belgique t. 50., 1916-1917, p. 453) eadem est ac Lab. pulchella Speg.

130. Laboulbenia gracilis Speg., Laboulb. ital. II, in Anal. Mus Nac. 4104 Buenos Aires XXVII (1915) p. 54, fig. 21. — Eulabouibenia haplocytia, melanopsallia, apodotheca, malacochaeta, monomastiga, mediocris, elongata, 250-500 μ alta, fuscula; cellula basali abbreviata, obconico-cylindracea, 30-60 × 15, praebasali longissima, 150-300 × 20, plus minusve infra medium angustata sed utrimque leniter tumidula; androsticho normali superne infuscato; psallio parvo nigro; paraphysopodio nec non antheridiopodio pro ratione parvis, in paraphyse brevi simplici productis; gynosticho normali; perithecio atro, subopaco, elongatulo, 80-100 × 20-25, gracili, rectiusculo, a quarto infero libero, sursum modice attenuato, ostiolo crasso, obtuso, oblique subtruncato coronato.

Hab. in Sunii sp. indet., prope Coneglanum, Ven., Ital. bor.— L. Philonthi proxima sed bene distincta.

131. Laboulbenia planeticola Speg., Laboulb. Mus. ital., in Anal. Mus. 4105 Nac. Buenos Aires XXVI (1915) p. 487, fig. 30. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta. monomastiga, subparva, 210-220 μ alta, atrata; cellulis basali et praebasali suo aequilongis, gracilibus, pallidis pellucidisque; perithecio crasso, subovato, 75-85 ≈ 35-40, grosse et oblique umbonato-ostiolato, androsticho brevissime adnato; paraphyse primario praelongo, 250-300 μ attingente, gracillimo, ramulis 2 v. 3 etiam gracilibus longissimis ornato.

Hab. in Planete bimaculato, Bhamo, Birmania (L. FEA). — L. vulgari affinis sed paraphyse longissima gracilique satis distincta.

132. Laboulbenia Sebetheos Speg., Laboulb. Mus. ital. in Anal. Mus. 4106 Nac. Buenos Aires XXVI (1915) p. 488. fig. 31. — Eulaboulbenia, haphocytia, melanopsallia, apodotheca, malacochaeta, monomastiga, parvula, 125-175 μ alta, castaneo-fusca, geminata, altera fertilis, altera saepius abortiva; androsticho et gynosticho parvis; perithecio pro ratione magno, 65 × 25, atro, crasse obtusissimeque umbo-

nato, umbone oblique albo-ostiolato; paraphyse elongato, 150-200  $\mu$ , flaccido.

Hab. in Sebethe lusca, Aiè-manteior, Sumatra (O. BECCARI).

133. Laboulbenia stilicicola Speg., Laboulb. ital. I, in Redia X p. 41 4107 (1914) tab. III, fig. 23. — L. subterranea Thaxt. p. p. — (Monomastiga). Parvula gracilis, elongata, 175-250 µ alta, cellula basali prima brevissima conica, praebasali secunda quadruplo longiore cylindrica, pallidis, articulatione septi primi non tumefacta; perithecio atro, subopaco, ad tertium inferum usque androsticho adnato, gracili, elongato, 70-90 × 20-22, ostiolo attenuato-umbonato valde obliquo; paraphyse solitaria, simplice, 150-175 µ longa, a basi ad medium sensim crassiore, articulis paulatim brevioribus et magis infuscatis.

Hab. in Stilico fragili, prope Levico Trentino. — A Leubterranea Thaxt. typica, plurimis notis bene distincta.

134. Laboulbenia sigmoidea Speg. — Syll. XXII p. 15.— \* L. crucifera 4108 Speg., Laboulb. Arg. p. 638, fig. 168 b. — Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, majuscula, hyalina v. pallidissime mellea, perithecio rectiusculo umbone nigro ostioloque hyalino donato, paraphysopodio achroo in axi primario fumoso recto erecto crassiusculo, saepius ramululo ventrali ornato, producto, andropodio ramulis 2 horizontaliter divaricatis 1-antheridiatis coronato.

Hab, rarius in abdomine, inter trochanteres, Argutoris confusi, Montevideo, et Arg. bon ariensis, Sta Catalina. B. A. Argent. — Perith. 120-135 × 48 52; alt. tot. 250-400 μ.

135. Laboulhenia rugulosa Speg., Laboulb. Arg. p. 637, fig. 167.— Eu- 4109 laboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, mediocris, tota lateritio-umbrina, androsticho gynosticoque obscurioribus fere opacis ac transverse dense atro-rugosis, perithecio pro ratione majusculo elliptico-ovato intense colorato, saepius lineis longitudinalibus 4-nigris tenuibus subrectis notato, obesulo, recto v. lenissime deorsum, subarcuato, basi breviter androsticho adnato, apice modice umbonato, ostiolo vix obliquo et hiante, labiis hyalinis, hypostomo dorso tantum nigrefacto, paraphysibus paucis plus minusve ochraceis subbrevibus.

Hab. in elytris Argutoris bonariensis, La Plata. — Perith.  $140-150 \times 70-75$ ; alt. tot.  $250-350 \mu$ .

136. Laboulbenia hiemalis Speg., Lab. Arg. p. 628, fig. 159. — Eula-4110 boulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta,

oligomastiga; parvula fere tota olivacea, cellula basali hyalina, paraphysopodio cellulisque axeos primarii e latere dorsali nigromarginatis, e latere ventrali nudis v. filamentis paucis tenuibus ornatis, perithecio subelliptico sursum attenuato-umbonato, ostiolo obliquo minuto, dorso hypostomi nigro.

Hab. vulgata in toto corpore Anthonomi sp., La Plata. -

Perith.  $45.50 \times 18$ ; alt. tot. 90-110  $\mu$ .

137. Laboulbenia oedipus Speg., Laboulb. Argent. in Anal. Mus. Nac. 4111 Buenos Aires XXIII (1912) p. 222 fig. 52. — Parvula, 100-200 µ alta, fusco-mellea, melanopsallia, oligomastiga; cellula secunda receptaculi percrassa et tumida; peritheciis ellipsoideo-elongatis, 70-90 × 20-38, ad medium fere usque parte distali adnatis, ostiolo obsolete retuso, subobliquo, exappendiculato; paraphysibus solitariis vel geminis, mox articulatim deciduis.

Hab. in Trecho la evigato, La Plata, Argentina.

138. Laboulbenia Missionum Speg., Laboulb. Argent. in Anal. Mus. 4112
Nac. Buenos Aires XXIII (1912) p. 220, fig. 50. — Parvula. 150250 \mu alta, hyalina, melanopsallia, oligomastiga; peritheciis subcylindraceis, 120 \times 30, parum ostiolum normale infra usque, pleurogene parte distali adnatis; paraphysibus gracilibus elongatis.

Hab. in Carabide quodam (Feroniomorpha?), Puerto Bertoni, Misiones, Paraguay, Amer. austr.—L. barbatae Thaxt. et

L. Morionis Thaxt. affinis.

139. Labouibenia platensis Speg., Labouib. Argent. in Anal. Mus. Nac. 4113

Buenos Aires XXIII (1912) p. 230, fig. 61. — Mediocris 250·400 μ

alta, tota mellea, melanopsallia, oligomastiga; peritheciis late ellipsoideis, 100·110 × 50·60, ad apicem fere usque parte distali adnatis, ostiolo obtuso, brevi, exappendiculato, fuscescente; paraphysibus binis, brevibus, crassis; receptaculo subgracili, elongato, extrorsum saepe leniter incurvato.

Hab. in Brachyno bilineato, La Plata, Argentina.

140. Laboulbenia Blechri Speg., Laboulb. Argent. in Anal. Mus. Nac. 4114
Buenos Aires XXIII (1912) p. 199, fig. 27. — Fuscidula, parvula,
120-150 μ alta, melanopsallia, oligomastiga; paraphysibus inferne
fuscescentibus; peritheciis elongatis, subtorulosis, 50-60 × 25, ad
quartum inferum usque parte distali adnatis, ostiolo-obtuso pleurogene vel oblique dehiscente; antheridiis non vivis.

Hab. in Blechro platensi, La Plata, Argentina.

141. Laboulbenia leptostoma Speg., Laboulb. Argent. in Anal. Mus. 4115

Nac. Buenos Aires XXIII (1912) p. 217, fig. 47. — Pusilla, 300 µ

circ. alta, subhyalina, melanopsallia, oligomastiga; peritheciis subellipsoideis, 160  $\approx$  65, basi breviter parte distali adnatis, apice in ostiolo 1-labiato, 30  $\approx$  10  $\mu$ , labio cochleato productis; paraphysibus paneis hyalinis

Hab. in Bembidio indeterm., La Plata, Argentina.

142. Laboulbenia stolonicola Speg., Lab. Arg. p. 640, fig. 169. — Eu- 4116 laboulbenia, melanopsallia, apodotheca, hemisyncarpa, oligomastiga, elongata, gracilis, pallide straminea, androsticho gynosticho nee non perithecii parte infera fumosis, perithecio subcylindraceo-elliptico dorso convexulo ventre plano v. vix concaviusculo, hypostomo nigro antice impresso lineola nigra horizontali eximie limitato, ostiolo obliquo labiis rotundatis, andropodio minuto, paraphysopodio subcylindraceo sat elongato, paraphysibus geminis e cellula basilari oriundis hyalinis praelongis tenuibus.

Hab. in toto corpore S tolonis fulvostigmatis, Sta Catalina B. A. Argent. — Perith. 80-90  $\approx$  30-32; alt. tot. 200-225  $\mu$ .

143. Laboulbenia Galeritae Thaxt. — Syll. XIV p. 732. — \* L. pseudodeci. 4117 piens Speg., Lab. Arg. p. 593, fig. 126 g.; L. decipiens Speg. non That. Contr. Lab. arg. n. 37, F. — Eulaboulbenia, melanopsallia, podocarpa, malacotricha, subdichroma; parvula, olivacea, cellula basali et pedicello brevi peritheciali hyalinis, cellula II lata brevique aequilatera eximie triangulari-pentagona, septis receptaculi omnibus obliquis perithecio elliptico-cylindraceo, saepius lineis 4 dextrorsis ornato vix umbonato-ostiolato, hypostomo non v. parce infuscato, paraphysibus tenuibus numerosis.

Hab. in elytris Galeritae Lacordairei, Salta et Jujuy Arg. — Perith. tot. 90-105 × 28-40; alt. total. 190-225 μ.

- \* L. subbicolor Speg., 1. c. p. 595, fig. 126 j. — Eulaboulbenia, mela-4118 nopsallia, podocarpa, malacotricha, subdichroma. A L. bicolore Tht. recedit cellulis II et III atris opacis indistinctis marginem dorsalem receptaculi efformantibus, IV et V pro parte tantum nigrefactis atque bene perspicuis, gynosticho pallido, pedicello peritheciali breviusculo, perithecial lineis longitudinalibus tenuibus dextrosis notato ac paraphysibus brevioribus gracilioribusque.

Hab. in margine inf. abdominis Galeritae ruficollis,
Salta Arg. (RICHTER). — Perith. 140-150 × 42-45; alt. tot. 285-300 μ.
144. Laboulbenia erectiuscula Speg., Laboulb. Arg. p. 580, f. 116 a. — 4119
Eulaboulbenia, paralaboulbenia, ceratotheca, apodotheca hemisyncarpa, malacochaeta, oligomastiga; major, fere erecta, hine inde

fumosa, rostro ostioli subteguliformi donato.

Hab. in thorace Argutoris confusi, Montevideo, Sta Catalina et La Plata. — Perith. tot.  $105-115 \times 45-48$ ; alt. tot.  $200-300 \mu$ .

145. Laboulhenia leptostomoides Speg., l. c. p. 581, fig. 116 b. — Eula. 4120 boulhenia, paralaboulhenia, ceratotheca, apodotheca, hemisyncarpa, malacochaeta, oligomastiga; mediocris incurvata, cellulis I et II hyalinis, ceteris receptaculi fumosis, perithecio obscuriore lineis longitudinalibus 4 nigris cruciatis notato, sub hypostomo pallidiore, ostiolo cochleato ut in typo, hypostomo ventre tantum nigrifacto, psallio parvo, paraphysibus saepius binis fumosis parce breviterque ramuligeris.

Hab. in thorace Argutoris confusi, Montevideo. — Perith. tot. 120-125 × 56-60; alt. tot. 200-250. — Cum praecedenti, Lab. leptostomae Speg. cognata.

146. Laboulbenia funerea Speg., Laboulb. Argent. in Anal. Mus. Nac. 4121 Buenos Aires XXIII (1912) p. 208, fig. 37. — Parva, 250 μ circ. alta, tota atro-fusca, melanopsallia, oligomastiga; peritheciis late subcylindraceis, 100 × 30, parte distali vix ima basi adnatis, ostiolo brevi, obtuso, crassiusculo, integro, exappendiculato; paraphysibus paucissimis, brevibus, mox evanidis.

Hab. in Anaedo carioso, S. Catalina, Argentina.

147. Laboulbenia tittephora Speg., Laboulb. Arg. p. 577, fig. 114. — 4122 Eulaboulbenia, paralaboulbenia, theletheca, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, mediocris, elongata, gracilis, fumoso-flavescens, cellulis II e III, saepe IV etiam, grosse granulosis, perithecio angusto, ad medium papillis duabus horizontalibus fuscis ornato, hypostomo coarctato nigro ad ventrem foveolato impresso, ostiolo, obtuso obliquo, labiis conniventibus hyalinis, paraphysibus paucis chlorinis.

Hab. in elytris Harpalidei sp. indet., Jujuy Argent. — Perith.  $80.96 \times 28.30$ ; alt. tot. 250-350.

148. Laboulbenia Tachyis Thaxt.— Syll. XVIII, p. \$20.—\* L. diversipes 4123 Speg., Laboulb. Arg. p. 642, fig. 171 a.— Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga; a typo cellulis basali et praebasali magnitudine summopere ludentibus, pecithecio paraphysibusque brevioribus crassioribusque distincta.

Hab. in artubus Tachyis corruscantis, La Plata Arg.— Perith.  $60-80 \approx 22-28$ ; att. tot.  $100-300 \mu$ .— \* L. subbitubercu-

lata Speg., Lab. Arg. p. 644, fig. 171 b. — Eulaboulbenia, melanopsallia apodotheca, hemisyncarpa, malacochaeta, oligomastiga,
elongata, gracilis, paraphysopodio dorso gibbuloso, cellulis una v.
duabus basilaribus axium subglobosis nigro-septatis, perithecio ob
scure fumoso ad medium leniter angulato-subgibboso atque, andropodium contra, macula parva orbiculari fusca notato.

Hab. in elytris Tachys? sp., La Plata et Montevideo. – Perith. 70-75  $\approx$  18-20; alt. tot. 180-220  $\mu$ ,

149. Laboulbenia distinguenda Speg., Lab. Arg. p. 621, fig. 153:— Eu-4124 laboulbenia, melanopsallia, apodotheca, hemisyncarpa, melanochaeta, oligomastiga, tota plus minusve pallide olivascente, paraphysopodio nec non cellulis inferis axeos paraphysarii primarii olivascentibus dorso nigro-marginatis, superficie totius receptaculi, cellula basali excepta, transverse dense minuteque papilloso rugulosa, perithecio elongato-ovato normali.

Hab. in elytris Carabidorum quorumdam ind., Salta et La Plata Argent. — Perith. 75-85 × 35-40; alt. tot. 175-225 μ.

150. Laboulbenia Richteri Speg., Lab. Arg. p. 636, fig. 166 — Eula- 4125 boulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, mediocris, pallidissime mellea, elongata, gracilis, dorsum versus leniter arcuata, septo 2 valde obliquo, cellulis totius receptaculi dense minuteque transversim rugulosis, perithecio elongato-fusoideo, umbonato-ostiolato, hypostomo nigro, labiis ostiolaribus conniventibus obtusis hyaliniis, paraphysibus, subbrevibus, paraphysopodio nec non axeos paraphysarii cellulis inferis dorso nigro-marginatis.

Hab. in elytris minuti C a r a b i d e i (Pterostichus?), Salta Argent. — Perith. 90-110 × 32-36; alt. tot. 275-325.

151. Laboulbenia argyropotamica Speg, Laboulb. Arg. p. 598, fig. 129.— 4126 Eulaboulbenia, melanopsallia, apodotheca, eleutherocarpa malacochaeta, oligomastiga, subparva, tota olivacea, septis 1, 2 et 3 valde obliquis, perithecio cylindraceo-subfusoideo ab ima basi libero sursum in ostiolo obtusiusculo hyalino, hypostomo nigro, attenuato, androstichi parte supera libera, paraphysopodio brevissimo paraphyses geminas 5-6-meras, septis nigras coarctatulas fulcente, andropodio minimo 1-antheridiato.

Hab. in elytris Clivinae longipennis, in insula Santiago, La Plata. — Perith. 80-110 × 28-30; alt. tot. 150-200 µ.

152. Laboulbenia flagellata Peyr. — Syll. XIV p. 731 — \* L. gracilis 4127 Speg., Laboulb. ital. I, in Redia X, p. 51 (1914) tab. VI fig. 39.—

(Oligomastiga). Forma sat pallida et pellucida 175-200  $\mu$  alta, pro ratione gracilis et elengans, tuberculo ostiolari valido, hypostomo nigro, ostioli labiis hyalinis, perithecio normali, 70-75  $\approx$  30, basi ad tertium usque androsticho adnato, paraphysibus paucis elongatis, 150-300  $\mu$  longis.

Hab. in Ophono maculicorni, prope Coneglanum, Ital. bor.

- \* L. harpalicola Speg., 1. c. p. 52, tab.VI fig. 40.— Differt a typo ha-4128 bitu magis elongato, paraphysopodio et andropodio non incrassatis, peritheciis magis rotundatis, pallidioribus pellucidisque. Alt. 225-250 μ, perith. 75-80 × 35 40, paraph. major. 200 μ alta.

Hah. in Anchomenido indeterm., Roma, et in Harpalo aeneo, in silva Cansiglio prope Tarvisium, It. bor.

- \* L. pseudofiageliata Speg., l. cit. p. 52, tab. VI fig. 41.—A typo redit habitu crassiore brevioreque atque umbone ostiolari brevi obtuso, hypostomo non infuscato, labiis subdenticulatis et peritheciis lenissime dextrorsum tortis. — Alt. 175-200 μ; perith. 60 × 35. — Affinis etiam L. polyphagae Thaxt.

Hab. in Abaceto Salzmanni in Sardinia, et Pogono littorali, in Apulia, Ital. austr.

- \* L. romana Speg., l. cit. p. 53, tab. VI fig. 42.— Forma satis infuscata, receptaculo angusto, cellulis prima et secunda subaequilongis, androsticho superne tumido et dorso subgibboso recedens. — Alt. 150-200 μ, perith. 65-70 × 25, paraph. 150-200 μ alt.

Hab. in Ophono planicolle et O. mendace, Roma, Ital. centr.

- \* L. strictipes Speg., l. c. p. 53, tab. VI fig. 43. — A typica recedit 4131 colore melleo pallido, umbone peritheciali brevi, late rotundato, hypostomo nigro ostioloque hyalino sed praecipue cellula basali dimidia infera cylindrica, dimidia supera abrupte turbinosa. — Alt. 150-175  $\mu$ ; perith. 75-80  $\times$  30-35, paraph. 120-200  $\mu$  alt.

Hab. in Laemostenide algerino, prope Sassari, Sardinia.

- \* L. paranensis Speg., Lab. Arg. p. 625, fig. 155 c. — Eulaboulbenia, 4132 melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga; majuscula, subhyalina, perithecio ellipsoideo dorso valide incurvo superne fere subgibboso apice abrupte oblique rotundato, umbone brevi nigro, labiis ostiolaribus obtusis coronato, paraphysopodio andropodioque hyalinis parte infera paraphysum pallide olivacea.

Hab. in toto corpore Parameci cylindrici, Parana, Entre Rios (J. MAC DONAGH).

— \* L. anysodactylicola Speg., Lab. Arg. p. 623, fig. 155 a. — Eulaboul- 4133 benia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, submajuscula, tota pallidissime straminea, receptaculo elongato angusto, cellula IV sub psallio truncata atque dorso angulato-prominente, perithecio valido umbonato, hypostomo nigro ad ventrem impresso-subfoveolato, labiis ostioli obliqui prominulis rotundatis, paraphysibus paucis hyalinis.

Hab. pervulgata in toto corpore Anysodactyli cupripennis, Montevideo, Salta, Tucuman, Catamarca, Cordoba, Buenos Aires, La Plata. — Perith. 85-120 \* 22-35; alt. tot. 200 500 μ.

- • L. lepidioides Speg., Rev. Lab. arg. p 624, L. lepida Speg. (non 4134 Thaxt.) Contr. Lab. Arg. p. 40, fig. 46. — Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, cellulis I et II hyalinis, ceteris paraphysibus ac praecipue perithecii parte infera chlorinis, cellula II inflatula, perithecio elliptico elongato erecto, paraphysopodio majusculo andropodioque parvulo.

Hab. in elytris Harpali sulcatuli, Misiones, Rep. Arg.— Perith. 100-110 ≠ 35-40; alt. tot. 300-400 μ.

var. Bordei Maire, Bull. Soc. Hist. nat. Afrique du Nord IV n. 9., 4135
 p. 2, tab. II fig. 6-8 (1912). — A typo speciei maxime variabilis non differt nisi ascosporis brevioribus et angustioribus, 50.52 × 4-5.

Hab. in Harpalo tenebroso, Coleopt., Agoulmine-Aberkane in Afkadou, Africa bor. (R. DE BORDE).

153. Laboulhenia algerina Speg., Laboulb. ital. I, in Redia X p. 45 4136 (1914) tab. IV fig. 30 et in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 489.— Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, a L. flagellata Peyr. turgiditate cellulae quartae androstichi, crassitudine majore, ostiolo magis rotundato recedens, colore autem rufescente L. Rougeti Rob. accedens, sed cellulis inferis axeos paraphysarii primarii paraphysopodioque non atratis distincta.—Alt. 200-300 μ; perith. 100-115 × 45-65; paraph. 200-250 μ alt.

Hab. in Pristonycho algerino in Italia (Latium, Sardinia) et in Africa bor. (Tunisia), nec non in Pr. hepatico, Teheran, Persia.

154. Laboulbenia paupercula Speg., Laboulb. ital. II, in Anal. Mus. 4137 Nac. Buenos Aires, XXVII (1915) p. 59 fig. 25. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacocnaeta, oligomastiga.

parva, 220 μ alta, pallida; cellulis basali et praebasali elongatis, subcylindraceis; androsticho brevi crassoque, cellula tertia maxima, quarta minima, psallio angusto, atro, parum distincto coronato; gynosticho normali, cellula decima turgida et valde prominula; perithecio ad quartum inferum tantum androsticho adnato, subfusoideo, 80 × 25, ventre inflatulo, superne elongatulo, in ostiolo parum obliquo subhyalino producto; paraphysopodio gibboso, noduloso, atro, opaco; antheridopodio majusculo, atro, parum distincto; paraphysibus pau cis, brevibus, penicilliformibus.

Hab. in Tachyis sp. indet., Roma, Ital. centr. — Affinis L. Tachyis Thaxt. et L. Blechri Speg. sed distincta.

155. Laboulbenia pedicellata Thaxt. — Syll. XIV p. 733 — L. \* bogo- 4138 sensis Speg., Laboulb. Mus. ital. in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 496, fig. 37. — Oligomastiga. Habitu graciliore, cellula praebasali magis inflata nec non perithecio ab androsticho omnino libero a typo recedere videtur. — Alt. 200-250 μ, perith. 90-100 × 50, paraph. 60-120 μ alt.

Hab. in Anchomeno fuscicorni, Ansala, Bogos, Africa (O. ANTINORI).

- \* L. ventricosa Speg., Laboulb. Arg. p. 608, fig. 142 b. — Eulaboul-4139 benia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, brachymastiga, parva, tota fumosa, cellulis I et II anguste pedicelliformibus, androsticho gynostichoque dense minuteque punctulatis, perithecio valide ventricoso.

Hab. in elytris Bembidii mendocini, Alto Pencoso, San Luis Arg. — Perith. 75-80 × 40-45; alt. tot. 150-175 μ.

156. Laboulbenia Pterostichi Thaxt.— Syll. XIV p. 734.— \* L. Charrua 4140 Speg., Lab. Arg. p. 634, fig. 165 b. — Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, tota hyalina, linea media perithecii ejusdem cum androstichi adhaerentia atque paraphysis simplicis parte superiore saepe leniter fumosis.

Hab. in elytris Feroniomorphae moerentis, Montevideo. — Perith.  $80-110 \times 25-40$ ; alt. 200-300.

157. Laboulbenia Cryptici Speg., Laboulb. Arg. p 620, fig. 152 — Eu-4141 laboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, parvula, fere tota olivacea; cellula basali subhyalina praebasalem subaequante, tertia ceteris saepius obscuriore, quinta et septima segmentiformibus minimis, psallio subcrassiusculo latiusculoque, paraphýsopodio ejusdemque axeos primari cellulis inferis intense coloratis atque dorso nigricantibus, paraphyse solitaria v.

geminata, perithecio elongato-ellipsoideo, umbonato-ostiolato, hypostomo nigro, ostiolo obliquo labiis parum evolutis.

Hab. in elytris Cryptici platensis, Chaco Argent. — Perith.  $70-80 \approx 30-32$ ; alt. tot.  $175-200 \mu$ .

158. Laboulbenia jujuyensis Speg., Lab. Arg. p. 630, fig. 161. — Eu-4142 laboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastica, tota obscure olivacea, cellula basali pallida, praebasali medio subcoarctata minute transversim rugulosa, ceteris receptaculi obsolete fusco-maculatis, perithecio elliptico-sublanceolato sursum attenuato vix umbonato, ostiolo subobliquo labiis pallidioribus parum hiantibus donato, lineis longitudinalibus dextrorsis 4 nigris notato, paraphyse unica simplice crassiuscula oligomera fusca, ramulis antheridialibus gracilibus breviusculisque.

Hab. in elytris Egae argentinae, Jujuy, Argent. — Perith.  $120-135 \times 45-50$ ; alt. tot.  $300-325 \mu$ .

159. Laboulbenia formosa Speg., Lab. Arg. p. 626, fig. 156, L. poly-4143 phaga Speg., Contr. Lab. Arg. n. 56 fig. 62 e, non Thaxt. — Eulaboulbenia, melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga, mediocris, tota pallide olivacea, paraphysopodio oblique elliptico, articulos 2 superpositos isomorphos sensim minores gerente, omnibus tribus dorso paraphysem obliquam simplicem obscure-olivaceam fulcentibus.

Hab. in elytris Harpali sp., Formosa in Chaco boreali. — Perith.  $100-110 \approx 40-42$ ; alt. tot. 245-275.

160. Laboulbenia siramboensis Speg., Laboulb. Mus. ital., in Anal. Mus. 4144 Nac. Buenos Aires XXVI (1915) p. 498 fig. 40. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, parvula, 150-175 μ alta, fusco-mellea, ad septa omnia valide constricta; habitu subtoruloso; cellula praebasali brevi, subglobosa; perithecio androsticho ad dimidium fere adnato, anguste ellipsoideo, 75 × 25 30, grosse umbonato oblique ostiolato; paraphysibus paucis, elongatis, 75-100 μ, fumosis.

Hab. in Anchomenidis sp., Sirambò, Sumatra. — Habitu toruloso satis distincta, ceterum L. flagellatae Peyr. affinis.

161. Laboulbenia Anisodactyli Speg., Laboulb. ital. I, in Redia X p. 46 4145 (1914) tab. IV fig. 31. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, mediocris, 350-400 μ alta, subfumoso-olivascens; paraphysodio et andropodio atratis coalescentibusque; paraphysibus paucis, fumosis, 50-100 μ longis; perithecio late elliptico, 110-130 × 60-65, obscure fuscescente, grosse umbonato,

ostiolo obliquo labiis concoloribus; cellula androstichi quarta infuscata, quinta subhyalina nitida, decima autem gynostichi opaca, subnigra et tumida.

Hab. in Anisodactylo binotato, Lovajano prope Pisam, Ital. bor.-centr.

162. Laboulbenia Axinotomae Speg., Laboulb. Mus. ital., in Anal. Mus. 4146 Nac. Buenos Aires XXVI (1915) p. 490 fig. 33. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, mellea, parva, 250  $\mu$  alta; cellula praebasali majuscula, leniter incrassata; perithecio subcylindraceo 90  $\approx$  30, parum magis infuscato, apice grosse umbonato, hypostomo nigro, ostiolo obliquo labiis gracilibus hyalinis; paraphysibus paucis, elongatis, 300-350  $\mu$ , non incrassatis.

Hab. in Axinotoma fallace, Bolama, Guinea lusitanica (L. FeA). — L. flagellatae Peyr. proxima sed satis, ut videtur, distincta.

163. Laboulbenia etrusca Speg., Laboulb. ital. I, in Redia X p. 50 4147 (1914) tab. V fig. 36. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malachochaeta, oligomastiga, 275-300 μ alta, cellulis basali et praebasal: subhyalinis, ceteris atris opacis; perithecio subelliptico 110-125 × 50, nigro opacoque, apice sensim obtuse umbonato, ostiolo non vel vix distincto; paraphysibus saepius binis fumosis, interna crassiore validioreque, 16-20 μ diam., externa 10-12 μ. — Certe affinis L. vulgaris Peyr. sed bene distincta.

Hab. in Bembidio conforme, prope Pistoia, Ital. bor. centr.

164. Laboulbenia maroccana Speg., Laboulb. Mus. ital. in Anal. Mus. 4148
Nac. Buenos Aires XXVI (1915) p. 494, fig. 36. — Eulaboulbenia,
haploeytia, melanopsallia, apodotheca, malacochaeta, oligomastiga,
mediocris, 250-275 μ alta, tota pallide mellea; cellulis secunda, tertia et quarta transverse minute rugulosis; perithecio brevi, crasso,
90-100 × 40-45, superne vix angustato, crassissime obtusissimeque
umbonato, non vel vix infuscato, ostiolo parum manifesto; paraphysopodio cylindraceo paraphysem unicam 8-10-articulatam, 250300 × 15-20 gerente; antheridiopodio subconoideo in paraphysem
7-8-articulatam producto, articulo secundo biantheridiifero.

Hab. in Brachyno bombarda, Tangeri, Marocco, Afr. bor. — L. polyphagam Thaxt. et L. flagellatam Peyr. in mentem revocans, sed distincta.

165. Laboulbenia Bottegoi Speg., Laboulb. Mus. ital in Anal. Mus. 4149

Nac. Buenos Aires XXVI (1915) p. 491 fig. 34. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, minima, 75-100  $\mu$  tantum alta; obscure mellea, translucens; cellula basali breviter cylindracea, praebasali subturbinata; paraphysopodio amplo, hyalino; axi paraphysario primario simplici, 2-3-grosse nigro-annulato, perithecio subcylindraceo, 35  $\approx$  10, apice grosse umbonato, lateraliter ostiolato; paraphysibus paucis, 75  $\mu$  longis.

Hab. in Casnonia punctulata, Boràn, Somalia (G. Bottego).

166. Laboulbenia Ophoni Thaxt. — Syll. XVI p. 687. — \* L. augusta 4150 Speg., Laboulb. ital. I, in Redia X p. 57 (1914) tab. VII fig. 49. Oligomastiga. A typo differt tumiditate minore et omnibus partibus gracilioribus pallidioribusque. — Alt. 160-175  $\mu$ , perith. 65 \* 30, paraph. 100-125  $\mu$  longis.

Hab. in Harpalo aeneo et in Ophono sp., in Ital. bor (Ven.) et centr.

- \*L. fuscula Speg., l. cit. tab. VII fig. 50.—A typo colore fusco-melleo 4151 omnium paratium paraphysibusque plus minusve fumosis vel nigrescentibus recedit. — Alt. 125-175  $\mu$ , perith. 60-75  $\approx$  25-40, paraph. 100-125  $\mu$ .

Hab. in Harpalo flavicorni, Firenze, Ital. centr.

— \*L. insulicola Speg., l. cit., tab. VII fig. 51. — A typo recedit statura 4152 majore et totius corporis elongatione ac gracilitate psallioque nigro crassiore nec non saepe axi paraphysali primario fumoso vel nigrifacto. — Alt. 200-250 μ, perith. 90-100  $\approx$  35-40, paraph. 150-250 μ alt.

Hab. in Harpalo pubescente, ex ins. Elba, et in Ophono rupicola prope Romam, Ital. centr.

- \*L. minuscula Speg., l. cit., p. 58, tab. VII, fig 52.—A typo recedit 4153 statura conspicue minore et omnium partium gracilitate. — Alt. 90-100 μ, perith. 45-50 × 18-20, paraph. 125-150 μ longis.

Hab. in Harpalo sulfuripede, prope Romam, It. centr.
\*L. sepulchretorum Speg., l. c., p. 59, tab. VII fig. 53. — Statura et turgescentia nonnihil minoribus, constrictionibus ad septa validioribus sat a typo distincta. — Alt. 125-150 μ, perith. 60 × 22, paraph. major 75-100 μ alta.

Hab. in Harpalo rubripede, in cemeterio, Coneglanum, It. bor.

- var. dilatata Maire, Bull. Soc. Hist. Nat. Afrique du Nord, t. 11., 4155

1920, Extr. p. 24, fig. 5. — A typo differt statura elongata, receptaculo infra appendices et perithecium dilatato, perithecio leniter atro-fusco suffuso, cellula quinta minore breviore, ascosporis majoribus  $(46.48 \times 5)$ .

Hab. in Ophono pubescenti L., Mouzaïaville, Algeria, Africa bor.

67. Laboulbenia guineensis Speg., Laboulb. Mus. ital., in Anal. Mus. 4156 Nac. Buenos Aires XXVI (1915) p. 493 fig. 35. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, mediocris, 350-400  $\mu$  alta, rufescenti-fusca; cellula praebasali elongata, subcylindrica, ventre convexa, ad septum primum et secundum constricta; perithecio majusculo, cylindraceo, 125-140  $\approx$  35-50, grosse umbonato, vix bilobo-ostiolato; paraphysibus paucis, 150-250  $\mu$  altis; paraphysopodio et cellula basali axeos paraphysarii primarii margine externo, saltem in juventute, infuscatis.

Hab. in Megalonycho acanthuro, Bolama, Guinea lusitanica (L. FEA). — L. Rougeti Rob. et L. Catascopi Thaxt. notis variis proxima sed satis distincta.

168. Laboulbenia Olistopi Speg., Laboulb. ital. I, in Redia X p. 55 4157 (1914) tab. VII fig. 47 et in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 495. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, parvula, 175 μ alta, rufescentiatra, pellucida; perithecio opaco, 75 × 40, ostiolo laterali obtuso, labio ventrali tantum hyalino; paraphysibus rigidulis, parum elongatis, simplicibus, subhyalinis, primaria 125 μ alta.

Hab. in Olistopo rotun dato in Toscana, Ital. bor.-centr., et O. Sturmii in Saxonia. — Affinis L. flagellatae et L. polyphagae a quibus facile distinguitur colore rufescente ut in L. Rougeti Rob.

169. Laboulbenia coneglanensis Speg., Laboulb. ital. I, in Redia X 4158 p. 47 (1914) tab. IV fig. 32. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastica, mediocris, 250-400 μ alta, fuscidula, elongata; cellula basali brevi, obconoidea, 40-50 × 20-25; praebasali duplo triplove longiore, cylindracea, 80-150 × 22-32; septo primo plus minusve infuscato, leniter sed semper constrictulo; perithecio subcylindraceo 100-125 × 30-50, obscuriore, deorsum breviter androsticho connato, sursum conoideo vel subrotundato, in ostiolo valido, hypostomo atro, oblique truncato, labiis hyalinis donato producto: paraphysibus paucis subhyalinis, longiusculis, 175-250 μ longis.

Hab. in Ophono pubescente in Italia boreali. - Affinis L. flagellatae Peyr. et L. melanariae Thaxt

\*L. grisea Speg., l. cit. p. 48, tab. V fig. 33. — A typo recedit cellula 4159 praebasali conspicue breviore et crassiore, septo primo validius constricto et nigrificato, peritheciis subpallidioribus, paraphysibus binis vel ternis tantum. — Alt. 200-225; cellula basalis 35 × 20, praebasalis 40 × 20, perith. 100-30-35, paraph. 220-225 μ.

Hab. in Ophono hospite, Roma, et O. griseo, prope Coneglanum, in Italia bor.

- \* L. psittacea Speg., l. cit. p. 48, tab. V fig. 34. — A typo recedit statura minore et gracilitate omnium partium, cellula basali parum quam praebasali breviore sed aequicrassa, hyalina, septo valide coarctato, perithecio nigro opaco, ostioli labiis etiam nigris, cellula quarta androstichi atrata saepius opaca, paraphysum subhyalinarum axi primario supra articulum secundum divaricate uniramoso.—Alt. 200-275 μ, cellula basalis  $50 \times 20$ , praebasalis  $75 \times 20$ , perith.  $100-110 \times 25-30$ , paraph. 225-250 μ alt.

Hab. in Harpalo psittaceo, prope Coneglanum, Italia boreali.

170. Laboulbenia Paumamuae Speg., Laboulb. Mus. ital., in Anal. Mus. 4161
Nac. Buenos Aires XXVI (1915) p. 506 fig. 46. — Oligomaștiga.
Parvula, 80-125 μ alta, fuscula; receptaculo turbinato, cellula basali majuscula obconica, praebasali trapezoide, e latere dorsali cellula gynostichi infera vacuoliformi, supera pusilla triangulari ornata; androsticho subnormali, psallio atro minuto parum manifesto coronato; axi paraphysario primario infuscato patentim acuto, superne in paraphysopodio subcylindraceo majusculo dorso axi paraphysali secundario longiusculo simplice vel bifido producto; antheridiopodio parvulo monomero; perithecio subfusoideo, leniter inaequilătero, 50-60 × 20, distincte umbonato, ostiolo minuto. laterali, obliquo; paraphysibus 200-250 μ longis.

Hab. in Paumamua sulcicolli, Paumamua River, Nova Guinea (E. MODIGLIANI).

171. Laboulbenia Scaphidomorphi Speg., Laboulb. Mus. ital., in Anal. 4162 Mus. Nac. Buenos Aires XXVI (1915) p. 497, fig. 39. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, mediocris, 200-250 μ alta, pallide castaneo-mellea, leniter sed distincte dorso arcuata; cellula praebasali crassa; perithecio obscuriore, ad tertium inferum androsticho adnato, cylindraceo, superne curvulo, 60-75 × 35, in umbone suboblique truncato cras-

sissimo producto; paraphysibus saepius geminis, elongatis, pallidis, deciduis, 150-200  $\mu$  altis.

Hab. in Scaphidomorpho Bosci, Chiriqui Panama, Amer. Centr. (E. RIBBE). — Species prope apicem gibboso-curvata, a caeteris omnibus facile dignoscenda.

172. Laboulbenia elegantissima Speg., Argent. in Anal. Mus. Nac. Bue-4163 nos Aires XXIII (1912) p. 205 fig. 33. — Subparva, 200-250 μ alta, tota obscure fuliginea, melanopsallia, polymastiga; peritheciis ellipticis, rectis, 100 ≈ 45-50, ad tertium inferum usque parte distali connatis, ostiolo breviter umbonato, regulari, exappendiculato; paraphysibus atris, fragillimis, subgracilibus.

Hab. in Feroniomorpha cordicolle, prope La Plata, Argentina. — L. variabili Thaxt. et L. fumosae Thaxt. proxima.

173. Laboulbenia Dailodonti Speg., Laboulb. Argent. in Anal. Mus. Nac. 4164
Buenos Aires XXIII (1912) p. 203 fig. 32. — Majuscula, 600-800 μ
alta, tota pallide olivacea, melanopsallia, polymastiga; peritheciis
basi brevissime parte distali adnatis, cylindraceis, 250-270 × 90,
ostiolo obtuso, vix obliquo, exappendiculato; paraphysibus paucis,
bifidis, crassis, subhyalinis.

Hab. in Dailedonto clandestino, Tucuman, Amer. austr.

174. Laboulbenia Antarctiae Speg., Laboulb. Argent. in Anal. Mus. 4165 Nac. Buenos Aires XXIII p. 196 (1912) fig. 24. — Tota fuscidula, mediocris, 200-300 μ alta. melanopsallia, polymastiga; peritheciis ovoideis, 100-120 × 50-60, parte distali ad tertium inferum usque connatis, lineis 4 longitrorsis subspiralibus reticulatis, ostiolo brevissimo, lato, obtuso, obliquo, nigrescente, exappendiculato; paraphysibus subnigricantibus, nodoso-serratis.

Hab. in Antarctia blanda, Cordoba, Argentina. — Quoad perithecia L. decipiens Thaxt., quoad paraphyses L. Pheropsophi Thaxt, in mentem revocat.

175. Laboulbenia Chlaenii Speg., Laboulb. Argent. in Anal. Mus. Nac. 4166 Buenos Aires XXIII (1912) p. 201 fig. 29 et in Anal. cit. XXVI (1915) p. 459. — Majuscula, 400-500 μ alta, mellea, hyalopsallia, polymastiga; receptaculo obconico inferne elongato, gracili atque incurvato; perithecio ellipsoideo, 175-180 × 70-75, ad tertium vel quartum inferum tantum parte distali adnato, ostiolo brevi nigrescenti obtuso obscureque subbilabiato; paraphysibus numerosis gracillimis simplicibus elongatis.

Hab. in Chlaenio platensi, purpurato, cum a-

tili, La Plata, Isla Santiago, Argentina, Montevideo, California. — L. variabilis Thaxt. et L. proliferanti Thaxt. affinis.

176. Laboulbenia proliferans Thaxt. — Syll. XVII p. 923 — \* L. subdi-4167 varicata Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. Buenos Aires, XXVI (1915) p. 462 fig. 7. — Psalliophora. A typo recedit cellulis proliferantibus tribus in paraphysibus tribus praelongis, 300 400  $\mu$  usque attingentibus, simplicibus, basi septis nigris plane destitutis productis. — Alt. 500-600  $\mu$ ; perith. 175  $\approx$  50.

Hab. in Chlaenio pectinipede, Karin-geçu, Birmania (L. FEA).

- \*L. subinterposita Speg., Laboulb. ital. I, in Redia X p. 33 (1914) 4168 fig. 9.

Hab. in Harpalo sulfuripede, in Italia. — Long. tot. 175-375  $\mu$ .

177. Lahoulbenia Lagari Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 4169 Buenos Aires XXVI (1915) p. 479 fig. 23. — Pseudoditheca. Haplocytia, parva, 270-300 μ alta; cellula basali cylindrica, praebasali abrupte turbinata; gynosticho brevi parum manifesto; androsticho elongato, perithecio adnato, psallio normali atrato; paraphysopodio maximo, cylindraceo, fumoso, apice articulo axeos primarii paraphysarii lageniformi, 50 × 40, coronato; antheridiopodio minuto penicillum antheridiorum pusillum fulcente; perithecio adhuc immaturo.

Hab. in Lagaro inepto, Bone, Algeria. — Species rursus inquirenda.

178. Laboulbenia Feae Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. 4170-Buenos Aires XXVI p. 465 fig. 10. — Haplocytia, apodotheca, schizosoma, subparva, 200-300 μ alta, gracilis, fuscula; cellulis basali et praebasali cylindraceis, elongatis, subhyalinis; androsticho majusculo, etiam cylindraceo, apice breviter libero atque psallio atro valide constricto coronato; paraphysibus hyalinis, elongatis, 250-300 μ longis, paucis; gynosticho abbreviato, cellula septima fere abortiva; perithecio elliptico-subcylindraceo, 85 × 30, subnigrescente, crasse umbonato, hypostomo nigro, ostiolo oblique truncato, labiis hyalinis donato.

Hab. copiosa in Deropeltide sp., in ins. St. Tomè, Afr. lustanica (L. Fea).

179. Laboulbenia Elaphri Speg., Laboulb. Mus. ital., in Anal. Mus. 4171 Nac. Buenos Aires XXVI (1915) p. 64 fig. 9. — Haplocytia, schizosoma, melanopsallia, pallida, 250 μ alta; cellulis basali et prae-

basali subturbinatis majusculis; androsticho apice breviter libero, valide rotundato-constricto, psallio nigro coronato; gynosticho normali; perithecio infuscato, elliptico-subcylindrico, 125  $\times$  40, breviter crasseque umbonato; paraphysibus paucis, divaricatis, fuscescentibus, 150  $\mu$  longis, axi primario ramum secundarium validiorem, torulosum ac nigrefactum fulcente

Hab. in Elaphro cupreo, ex Belgio — Affinis L. clivinali Thaxt. sed facile distinguenda.

180. Laboulbenia Brachyonychi Thaxt. — Syll. XVI p. 683. — \*L. Euschi- 4172 zomeri Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. Buenos Aires XXVI (1915) p. 463 fig. 8. — Schizosoma. A typo differt statura conspicue minori (200-250 μ), perithecio (100-125 × 25) brevius pedicellato, ostiolo rotundato-subtruncato, cellula quinta minus perspicua, paraphysibus pluribus brevioribus, 50-100 μ altis.

Hab. in Euschizomero aeneo, Tikekae, Pegù, Birmania, Indiae or. (L. FEA).

181. Laboulbenia Rhytisterni Speg., Laboulb. Mus. ital., in Anal. Mus. 4173 Nac. Buenos Aires, XXVI (1915) p. 466 fig. 11. — Haplocytia, schizosoma, melanopsallia, malacochaeta, oligomastiga, mediocris, 300-500 μ alta, mellea; cellula praebasali elongata, satis inflata; androsticho sursum breviter libero, psallio crassiusculo nigro coronato, paraphysibus paucis, divaricato-ramulosis, 150-200 μ longis aucto; perithecio elliptico, 120-150 × 50-60, apice grosse umbonato, umbone nigro oblique truncato, ostiolo parum perspicuo.

Hab. in Rhytisterni sp. indet., Rock-Hampton, Australia.— L. pallescenti Thaxt. et L. clivinali Thaxt. cognata

182. Laboulbenia Sphodri Speg., Laboulb. ital. I, in Redia X p. 36 4174 (1914) tab. II fig. 15. — Eulaboulbenia, haplocytia, melanopsallia, apodotheca, schizosoma, majuscula, 400-500 μ alta, infuscata; paraphysopodio nec non andropodio percrassis coalescentibusque, cellula basali axeos primarii nigrescente, ceteris vix fumosis valde proliferis; perithecio 150-200 × 75 80, nigro, parte dorsali supera excepta, androsticho plus minusve concolore, cellula tamen quinta pallida, ad medium usque connato, ostiolo grosse umbonato, obliquo, saepius nigrificato, labiis vix decoloribus; paraphysibus 100-300 μ longis.

Hab. in Sphodro Schreibertii, in alpinis Forum Julii, It. bor.

183. Laboulbenia Morionis Thaxt.—Syll. XIV p. 733.—\* L. morionicola · 4175 Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. Buenos Aires XXVI

(1915) p. 480 fig. 24. — Synandrocarpa. Parvula, 200-250  $\mu$  alta, fusca; perithecio ad medium usque tantum saepius androsticho adnato, 65  $\approx$  25, umbone crasso, obtuso, nigro, ostiolo sublaterali minuto, labiis subhyalinis donato; paraphysibus paucis, fragilibus, mox deciduis.

Hab. in Morione humerato, Fly-river, Nova Guinea (E. DE ALBERTIS).

184. Laboulbenia Euplinis Speg., Laboulb. Mus. ital., in Anal. Mus. 4176 Nac. Buenos Aires XXVI (1915) p. 483 fig. 26. — Haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, strombotheca, parva, 200-250 μ alta, e melleo brunneo-picea, pellucida; cellula basali brevi, turbinata, dimidio supero infuscata, praebasali subcylindracea, ad septum sextum valide constricta; perithecio ellipsoideo, 100 × 45, androsticho basi breviter adnato, lineis utrimque duobus obliquis magis fuscis elathrato, apice longe umbonato, umbone superne eximie rotundato; psallio atro, crasso, brevi; paraphysibus elongatis, crassiusculis, 250-300 μ longis, pallidis, grosse articulatis.

Hab. in Eupline cyanipenni, Selebes (O. BECCARI).

185. Laboulbenia trachypus Speg., Laboulb. Mus. ital., in Anal. Mus. 4177

Nac. Buenos Aires XXVI (1915) p. 486 fig. 29. — Eulaboulbenia, haplocytia, melanopsallia, malacochaeta, oligomastiga, apodotheca, theletheca, parvula, 175 μ alta, pallide mellea, pellucida; cellula basali subconica levi, praebasali subcylindrica leniter infuscata, annulis papillarum densarum minutarumque transversis duodecim ornata, ceteris normalibus; androsticho perithecio ad dimidium et ultra adnato; perithecio ellipsoideo-elongato, 60 × 20, hypostomo

Hab. in Dromiii sp., Rio Cassine, Guinea lusitanica (L. FEA).

nigro torquato, ventri foveolato-depresso, ostiolo obliquo, labiis hyalinis; paraphysibus paucis, fragilibus, hyalinis, deciduis.

186. Labouhenia Ragazzii Speg., Laboulb. Mus. ital., in Anal. Mus. 4178 Nac. Buenos Aires XXVI (1915) p. 485 fig. 28. — Eulaboulbenia, haplocytia, melanopsallia, malacochaeta, apodotheca, oligomastiga, theletheca, parvula, 200-250 μ alta, pallida; cellula basali obconica, praebasali cylindracea; perithecio ad tertium inferum androsticho adnato, subcylindrico, 90-100 × 35, apice umbonato-ostiolato, ad basim hypostomi et ad medium cingulo turgido transverso infuscato ornato, ostiolo atrato subbilabiato; paraphysibus paucis, bacillaribus, simplicibus, brevibus.

Hab. in Harpali sp. indet., Let-marefià, Scioa (RAGAZZI).
187. Laboulbenia Leonardi Speg., Laboulb. Mus. ital., in Anal. Mus. 4179
Nac. Buenos Aires XXVI (1915) p. 484 fig. 27. — Eulaboulbenia, haplocytia, melanopsallia, malacochaeta, apodotheca, theletheca, parva, 225 μ alta, subpallida, brunnea; cellulis basalibus, androsticho gynostichoque annulis fuscis papilliferis transversis ornatis; perithecio subcylindraceo, 75 × 30, levi, grosse fusceque biannulato, apice breviter umbonato; paraphysibus 3-5, elongatis, subhyalinis, simplicibus, 150-200 μ longis.

Hab. in Megalonycho acanthuro, Bolama, Guinea lusitanica (L. FEA).

188. Laboulhenia Diabroticae Thaxt., Laboulb. on Chrysom. 1914, p. 38. 4180

Hab. in elytris Diabroticae Fairmairei et spp., Jalapa Mexico, Trinidad, Guatemala (Kellerman). — Perith. 100140 × 20-28; sporidia 50 × 5; appendix longior 120-140; recept. longius usque ad cellulam insertionis 175-265 × 35; long. tot. ad apicem perithecii 300 390 μ (Uncinella).

- \* L. Boggiani Speg., Laboulb. Mus. ital., in Anal. Mus. Nac. Buenos 4181 Aires XXVI (1915) p. 505 fig. 45. — (Uncinella). Parvula, 150-200 μ alta, fuscula, receptaculo pallido subcylindraceo; androsticho unicellulari obconico; perithecio conoideo subfusoideo, atrato. 90 ≈ 30; paraphysibus numerosis, simplicibus, nigris, rigidis, apice acutis abrupteque uncinato-incurvis, 60-70 μ longis.

Hab. in Diabrotica Kirschi, Puerto 14 de Mayo, Chaco (G. Boggiani) — A typo recedit apicibus paraphysarum semper recurvis acutisque, genus proprium novum, Phachomyceti affine, constituere digna (Uncinella).

189. Laboulbenia variabilis Thaxt., Monogr. Lab. I, p. 351.—\*L. clivinicola Speg., Rev. Lab. Arg 1917 p. 560, L. pallescens Speg. Contr. Lab. Arg. n. 50 p. 56 (non Thaxt.). — Zigolaboulbenia, pleocytia, apsallia, tota fusco-olivacea, psallio cellulis pluribus verticalibus collateralibus submajusculis substitute, paraphysopodio andropodioque bothryose proliferantibus, paraphysibus chlorinis densis filiformibus elongatis, perithecio inflatulo androsticho ad medium usque et ultra adnato, vix umbonato, hypostomo non v. vix infuscato, ostiolo leniter obliquo, labiis pallidioribus rotundatis, antico conspicue minore.

Hab. in toto corpore A-r distomis Arechavaleta, in ins. Santiago, La Plata — Perith. alt. tot. 110-14  $\times$  60-75; alt. tot. 400-500  $\mu$ .

- \* L. eumetabola Speg., l. c. p. 561 fig. 29 c.—Zigolaboulbenia, pleo-4183 cytia, apsallia, L. variabili Thaxt. affinis sed septo 8. semper obliquo, cellulis III et VI brevibus inaequalibus et praecipue cellulis I et II hyalinis nec non colore atro fere nigro opacoque, perithecii gynostichi ac saepe totius androstichi distinctissima.

Hab. in elytris Carabidi spec. (Platyni?), Montevideo.—Perith. 150-175 × 60-75; alt. tot. 400-500.

- \* L. pachythelica Speg., Rev. Lab. Arg. 1917, p. 562. — L. proliferans 4184 Speg., Contr. Lab. Arg. p. 57 fig. 63 (non Thaxt.). — Zigolaboulbenia, pleocytia, apsallia, obscure rufo-fusca dense obsoleteque subpapillosa, receptaculo superne opaco, perithecio erecto saepius lineis 4 longitudinalibus rectis notato, apice abrupte crasse breviterque nigro-umbonato, ostioli cellulis proliferantibus numerosis subopacis, paraphysibus copiosis fabrica longitudine nec non colore maxime ludentibus.

Hab. in elytris Hypolithi puberuli, Bonpland Misiones, Arg. — Perith. 150-175 \* 60-75; alt. tot. 400-500 μ.

190. Laboulbenia gibbulosa Speg., Laboulb. ital. II, in Anal. Mus. Nac. 4185 Buenos Aires XXVII (1915), p. 55, fig. 20. — Zygolaboulbenia. Magnitudine sat ludens, 200-400 μ alta, saepius valde infuscata; stipite elongato, fusoideo, 100-300 × 20-25, ad septum primum incrassato, fumoso; androsticho gynostichoque adnatis, atris, opacis; psallio nigro parum perspicuo; paraphysopodio ac antheridiophoro pallidis, crassis, subglobosis; paraphysibus brevibus, copiosis, penicillatim congestis; peritheciis conoideo-ellipsoideis, 80-90 × 30-40, atris, subopacis, ad medium marginis ventralis valide gibbosis, ostiolo rotundato, labiis parum inaequalibus, subhyalinis.

Hab. in Agono ?ruficorne, prope Coneglanum, Ven., It. bor., et verisimiliter etiam in Argentina.

191. Laboulbenia mirabilis Speg., Laboulb. ital. II, in Anal. Mus. Nac. 4186 Buenos Aires XXVII p. 56 (1915) fig. 22.— Laboulbeniopsis. Mediocris, 400 μ alta, plus minusve infuscata, cellulis prima et secunda pallidis genu septi primarii saepius tumidulo, cellula septima lineari aegerrime perspicua, sexta minuta trigona; perithecio androsticho normali ultra medium adnato, 125 × 35-40, apice bilabiato, labio ventrali concavo, dorsali capitato ostiolifero; paraphysopodio, psallio majusculo insidente, cylindraceo, cellulis binis superpositis fuscis coronato; antheridiopodio hyalino, majusculo, paraphysibus geminis, achrois, subhorizontaliter evolutis, crassis, multiarticulatis, 200 × 10 ornato.

Hab. in Bembidio nitidulo, prope Coneglanum Ven., Ital. bor. — Videtur forma anomala L. paradoxae Speg., quae quoque cum L. truncata Thaxt. et L. perpendiculari Thaxt. ad subg. Laboulbeniopsis (cellulis gynostichi sexta et septima plus minusve abortivis vel deficientibus) spectat.

192. Laboulbenia paradoxa Speg., Laboulb. ital. II, in Anal. Mus. 4187 Nac. Buenos Aires XXVII (1915) p. 58, fig. 23. — Laboulbeniopsis. Haplocytia, melanopsallia, apodotheca, malacochaeta, monomastiga, parvula, 175 μ alta, tota fusca; receptaculo conoideo, androsticho majusculo, regularibus; psallio nigro latissimo, gynosticho valde abbreviato perithecioque ultra medium androsticho adnatis; cellulis secunda, tertia, quarta et sexta saepius longitrorsum rugulosis sep tima carente; perithecio conoideo-elongato, 90 × 35, umbone subcapitato praedito, ostiolo subdorsali crasseque bilabiato; paraphysopodio maximo, conico, 75-90 μ alto, in flagello 2-3-articulato, gracili producto; antheridopodio subhyalino, paraphyse maxima, percrassa, 110-125 × 15-20, clavata, 5-mera, concolore ornato.

Hab. in Bembidio nitidulo, prope Coneglanum, Ven., Ital. bor. — Affinis L. truncatae Thaxt.

193. Laboulbenia Acupalpi Speg., Laboulb. Mus. ital., in Anal. Mus. 4188 Nac. Buenos Aires, XXVI (1915) p. 458 fig. 4. — Zygolaboulbenia. Haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, tota pallida, 150 μ alta; perithecio subcylindraceo, 70-80 × 30-35, medio lateris ventralis plus minusve gibboso, gibba et ostiolo saepius infuscatis; cellula basali cylindracea, gracili, brevi, hyalina, praebasali brevi, crassa, subhyalina et obsolete minuteque maculata; ostiolo obliquo ventrali; paraphysibus 50-75 × 5.

Hab. in Acupalpo elegante, Neusiedler See, Hungaria.
\*L. cryptotheca Speg., Lab. Arg. p. 618, fig. 148 b. — Eulaboulbenia, 4189 melanopsallia, apodotheca, hemisyncarpa, malacochaeta, oligomastiga; mediocris subhyalina, perithecio saepius leniter fumoso, latere ventrali ad hypostomi basin nec non ad medium eximie gibbuloso angulato, receptaculo elongato normali, paraphysibus 1.3, andropodio minuto pauci-antheridiato.

Hab. frequens in elytris Ochtozeli bicoloris, Sta Catalina B. A., La Plata. — Perith. 65-75 × 25-28; alt. tot. 175-200 μ.
194. Laboulbenia patrata Speg., Laboulb. ital. II, in Anal. Mus. Nac. 4190 Buenos Aires XXVII (1915) p. 59 fig. 24. — Laboulbeniopsis. Haplocytia, melanopsallia, apodotheca, malacochaeta, oligomastiga, parva, 175-200 μ alta, castaneo-fusca; receptaculo pallido, obconico-

elongato; androsticho normali, septo tertio et quarto intus conniventibus; gynosticho cellula septima deficiente; paraphysopodio maximo hemisphaerico, axi paraphysario primario 2-3-cellulari, septis nigris opacis, cellula suprema maxima, clavata, intus incurva; antheridiopodio cuneiformi, parvo, antheridio solitario sessili donato; perithecio normali, ovoideo-oblongo, 85 × 35-48.

Hab. in Elateridis minutis, prope Coneglanum, Ven., It. bor.

- PEYERIMHOFFIELLA Maire, Bull. Soc. Hist. Nat. Afrique du Nord, t. VII, 1916, p. 18 (a cl. entomologo gallico P. de Peyerimhoff).— Receptaculo bicellulari; appendicis liberae filiformis cellula subbasilari vel rarias basilari ramulum antheridiferum simplicem vel breviter ramosum gerente.
- 1. Peyerimhoffiella elegans Maire, l. c., tab. I fig. 5-9. Minor (80-115 μ 4191 alta) crasse tunicata, dilutissime brunneola. Receptaculo bicellulari 20-25 μ longo, cellulae basalis pede atrato. Appendice subhyalino, longissimo (usque ad 200 μ), multiseptato, in cellula subbasali v. rarius in basali ramulum antheridialem simplicem v. breviter ramosum gerente; antheridiis acrogenis simplicibus. Perithecii maturi dilute brunnei, pedicello brevi (30-38 longo), crasso, bicellulari; perithecio (45-58 × 18-22) asymmetrico, subfusiformi, apice in collum attenuato; ostiolo cellulis 4 apice in papillas brevissimas desinentibus cincto. Ascosporis hyalinis, laevibus fusiformibus, utrimque acutis, inaequaliter 1-septatis; cellula superiore inferiore triplo longiore.

Hab. in membris et in abdomine Brachyglutae Reichei pr. Dely-Ibrahim Algeriae (DE BORDE) et B. dichroae in monte Mouzaïa Atlantis Algerici (DE PEYERIMHOFF), Africae bor.

- PSELAPHIDOMYCES Speg., Lab. Arg. p. 662 (1917). Laboulbenieus; receptaculum bicellulare; cellula supera dorso in androsticho simplici polymero, articulis superis e latere interne ad angulum superum antheridia conoidea parva gerentibus, ventre in pedicello polymero apice perithecigero producta; cellula ascogenica solitaria; sporis acicularibus geminatis excentrice 1-septatis achrois. Gen. Stichomyces Thaxt. affinis, pedicello peritheciali polymero distinctus.
- Pselaphidomyces Pselapti Speg., l. c. p. 662, fig. 190. Pusillus, 4192 totus fere hyalinus, margine dorsali androstichi simplicis saepe anguste nigrescente excepto; perithecio lanceolato subacutiusculo, pedicello 5-10-mero fulto.

Hab. in partibus dorsalibus Pselapti tuberculiferi, in nidis Attae Lundi, La Plata, Argentina. — Perith. 50-55 × 15-17; sporidia 15-18 × 2.

- RHACHOMYCES Thaxt. 1894. Syll. XI p. 454, XIV p. 735, XVI p. 690, XVII p. 917, XXII p. 15 (= Acanthomyces Thaxter 1892, nom. praeocc.).
- Rhachomyces argentinus Thaxt., Proc. Amer. Acad. 1912, p. 208; 4193
   Speg., Lab. Arg., fig. 191.

Hab. in elytris et artubus Agae argentinae, Jujuy Argent. boreal. — Perith.  $120 \approx 40\text{-}43$ ; appendix longior  $95~\mu$ ; long. totalis ad apicem perithecii 310-425.

Rhachomyces stipitatus Thaxt. — Sacc., Syll. XVI p. 691. — var. 4194 pallidus Maire, Bull. Soc. Hist. nat. Afrique du Nord, IV m. 9., p. 3 tab. II fig. 3-5 (1912). — A typo differt praecipue perithecio hyalino et appendicibus obscuris parcis.

Hab. praecipue ad pedes Aphaenopsidis Iblis, in spelunca Ifri-Maareb in Djurdjura, Algeria, Africa bor. (P. DE PEYERIMHOFF).

3. Rhachomyces Aphaenopsis Thaxt. — Sacc., Syll. XXII p. 15. — var. 4195 leanneli Cépède et Picard, Bull. Soc. Mycol. Fr. 1913, p. 555. — Rhach. Jeanneli Cépède et Picard, Bull. Scient. France Belgique t. 42., 1909, p. 253, ut species. — A Rh. Aphaenopsis Thaxt. differt cellulis receptaculi parum minoribus appendicibus contra multo longioribus, fere e basi omnino nigris, semper congestis, appendicibus specialibus brevibus apice hyalinis perithéciorum verisimiliter nullis; receptaculo 180-200 μ longo; appendicibus 1080-1120 μ long. nec 350 μ.

Hab. in Aphaenopside Jeanneli, in spelunca Oxibar prope Camoucihique (Tardetz-Sorkolus) in Pyrenaeis inf., et Aph. bucephala, in spelunca Lingué prope Moulis, St. Girons Ariège, Gallia (Coll. JEANNEL).

4. Rhachomyces orientalis Thaxt., Proc. Amer. Acad. 1915, p. 49.
 Hab. in trochanteribus insecti Tachyi affinis, Samarang Java.—
 Perith. 100-116 \* 25; recept. 60-80 \* 22; appendices longiores 110 μ, long. tot. ad apicem perithecii 160-200 μ.

5. Rhachomyces Peyerimhoffii Maire, Bull. Soc. Hist. nat. Afrique du 4197 Nord, IV, n. 9, p. 3 tab. Il fig. 1-2 (1912). — Perithecio maturo rufo-brunneo, subfusiformi, 120-200 × 50-70, sessili v. subsessili; ascosporis 60-70 × 5, hyalinis vel dilutissime brunneolis, laevibus,

apice vagina mucosa dilatata cucullatis, ad  $^{1}/_{3}$  infer. uniseptatis. Receptaculo 225-400  $\mu$  longo, rufo-brunneo; axis primarii vix ultra perithecii basim protracti v. proliferi, simplices v. ramosi, cellulis 14-18 stigmatiferis; axis secundarii cellulis conoideis 2-4 septatis, appendices antheridioque immixto gerentibus; appendicibus fuscoatris, subopacis, multiseptatis uniformibus usque 400  $\mu$  long; antheridiis unciformibus, pediculo unicellulari suffultis.

Hab. in Trechopside Lapiei, in «tessereft» Djebel-Haïzer, Africa bor.

6. Rhachomyces Fagniezi Picard, Bull. Scient. France Belgique t. 50., 4198 1916-1917, p. 457. — Perithecio hyalino v. vix pallide flavescenti, receptaculo subaequante v. plerumque longiore (185-195 μ), anguste fusoideo v. lanceolato apice acutato, pedicello brevi suffulto; receptaculo hyalino distincte incurvato, 130-170 μ longo; axe primario e parte basali insertionem perithecii attingentem, et parte distali libera efformato; altero e cellulis circ. 10, magnis, magis longis quam latis septo contractulis constituto, altero a 8-10 cell. parvis aequalibus quadratis, omnibus longe appendiculatis (app. 210-230 μ usque long.); axe secundario e cellulis minoribus efformato breviter appendiculatis (app. 100-150 μ long.); appendicibus omnibus brunneis, primariis apice incurvatis, secundariis rectis; antheridiis in axe secundario ortis, brunneis, fortiter elongatis collo elongato abrupte incurvato terminatis, 45 μ long.; sporis 35 μ long. Totus fungus 320-330 μ longo.

Hab. in Zuphio Schelkownikowi, ex Caucaso (CH. FAGNIEZ).

- SCAPHIDIOMYCES Thaxt., Proc. Amer. Acad. 1912, p. 209 Axis e receptaculo primario bicellulari constans; cellula subbasilaris gerens apice appendicem primariam ramosam et inferius receptaculum secundarium ex inde finita serie cellularum, perithecia pedicellata ramulosque alterne gerenti formatum. Antheridia simplicia in ramulis brevibus acrogena. Perithecia normalia.
- 1. Scaphidiomyces Baeocerae Thaxt., Proc. Amer. Acad. 1912, p. 209. 4199 Speg., Lab. Arg., fig. 9.

Hab. in elytra speciei indescriptae Baeocerae, ad Cortici a et ligna uda, Llavallol et Sta Catalina Argentina.

## CLEMATOMYCES Thaxt. - Syll. XXI p. 692.

1. Clematomyces argentinensis Speg., Lab. Arg. p. 480, fig. 23.— Maju- 4200

sculus, hemisphaericus, plus minusve melleus, receptaculo basi alterne sympodico, sterili infuscato superne subtrichotomico, ramis non parenchymaticis, mediano gracili antheridifero, lateralibus crassioribus peritheciferis omnibus lateraliter filamentis longis tenuibusque sympodice ramosis coronatis; peritheciis obclavato-conoideis, obscure melleis, in ostiolo mediocri obtusiusculo elongato attenuatis.

Hab. in artib. ant. Pinophili suffusi, Santa Catalina B. A., Argent. — Alt. tot. 350-400  $\mu$ ; perith. 135-140  $\approx$  35-40 (cum pede).

## COMPSOMYCES Thaxt. - Syll. XI p. 450.

1. Compsomyces platensis Speg., Lab. Arg. p. 483, fig. 25. — Medio- 4201 cris, hyalinus, perithecio excepto fumoso. Receptaculum dimerum breve, cellula subbasali e latere receptaculum secundarium fulcente, superne cellulam tertiam sustinente; cellula tertia receptaculis tertiariis binis sterilibus nec non, inter illa, pedicello perithecigero praedita; receptacula secundaria et tertiaria 1-mera pleurogene ascogonii rudimento donata atque superne appendice 4 mera apice paraphysibus saepius geminis ramulosis coronata; perithecium elongato-conoideum vertice obtuse obsolete subcapitulato, deorsum pedicello elongato cylindraceo imposito.

Hab. in elytris minuto Staphylin. cujusdam (*Escafidiano*), in ins. Santiago Argent. — Alt. tot. 230-275  $\mu$ ; perith. 90-100  $\times$  35-40 (sine ped.).

COCHLYIOMYCES Speg., Laboulb. Argent. in Anal. Mus. Nac. Buenos Aires XXIII p. 180 (1912) c. ic. — Dioicus? Receptaculum monostiche multicellulare, cellulis a basi ad apicem sensim latioribus; cellula apicalis in appendice sterili filiformi producta; cellula praeapicalis axim secundarium sustinens, cujus cellula basali e latere interno perithecigera. Perithecium cylindraceum torulosum. Antheridia adhuc ignota. — Genus Ecteinomyces Thaxt. accedens sed certe satis superque distinctum.

1. Cochiyomyces argentinensis Speg., l. cit., c. ic.— Characteres generis, 300-400  $\mu$  alt. receptaculo oblique 12-15-cellulari, superne 25-30  $\mu$  lato, perithecio 160  $\approx$  35, toto plus minusve intense melleo; sporidiis anguste lanceolatis, curvulis, hyalinis, superne acutioribus ad tertium inferum septatis, 40  $\approx$  5.

Hab. in Trecho laevigato, La Plata, Argentina.

- AUTOPHAGOMYCES Thaxt., Proc. Amer. Acad. 1912, p. 172. Individua mascula cellulae basilari et pedi individui feminei adhaerentia, ex pluribus cellulis superpositis formata et gerentia acropleurogena 1-plura antheridia majuscula, phialiformia - Individua feminea constans ex unica cellula basilari quae perithecii cellulam peduno, gerit; cellula ascogena unica; sporidia 1-septata.
- 1. Autophagomyces platensis Thaxt., Proc. Amer. Acad. 1912, p. 172. 4203 Hab. in elytris Tomoderi forticornis, Llavallol Argent. - Individuo masc. antheridia 1-3, 25 µ longa. Long. tot. ad apicem antheridii 58-63 \* 5. - Indiv. feminea: perith. 106 \* 28-32, cellula pedunc. 14-18 \* 10-14; cellula basilari 9 \* 10,5, dempto pede.
- 2. Autophagomyees nigripes Thaxt., Proc. Amer. Acad. 1912, p. 173.— 4204 Indiv. masc.: antheridia 1-2, 26 µ longa; longit. tot. ad apicem antheridii 60-70 \* 3.5. Indiv. feminea: perith. 106 \* 26; cellula pedunc. 26-28 \* 16; cellula basilaris sine pede 26 \* 9.

Hab. in superf. inter. abdominis Tomodori forticornis, Argentina.

- CRYPTANDROMYCES Thaxt., Proc. Amer. Acad. 1912, p. 173. Receptaculum ex binis cellulis suprapositis constans; cellula sup. perithecium singulum et appendicem gerens; appendix e cellularum serie unica non ramosa formata; sterili plures cellulae consecutivae, initio tamquam antheridiales cellulae funguntur; ex harum parietibus pertusis cellulae spermaticae effunduntur; perithecia normalia unicâ cellulâ ascogenâ praedita.
- 1. Cryptandromyces Peyerimhoffii R. Maire, Bull. Soc. Hist. Nat. A- 4205 frique du Nord, t. 11., 1920, Extr. p. 18, tab. I fig. 11-12. - Receptaculo bicellulari, subhyalino v. inferne melleo; cellula basali elongata, ungue subgloboso nigro hyalino-punctato, basi hyalinoapiculato, praedita; cellula subbasali multo minore, subtriangulari septo valde obliquo lateraliter dejecta, appendicem masculam et perithecii pedicellum gerenti. Appendice mascula antheridiis, ut videtur, carenti, in axi, cellulae basali evoluta, tricellulari; cellula inferiore subhyalina, subtriangulari; eellula media subquadrangulari, brunnea, septo superiore nigricanti; cellula terminali brunnea cylindro-conica, apice, apiculo acuto praedita. Perithecii pedicello, subhyalino, breviusculo, supra basim valde constricto; cellulis basalibus parvis, subtriangularibus; perithecio incurvo, asymmetrico, melleo, parum inflato, satis elongato, in rostrum validum, brevem,

in facie interna et externa fuscescentem, vix attenuato; ostioli rotundati labiis hyalinis prominulis; cellula ascogenica unica; ascis 4-sporis; ascosporae 1-septatae, cellula superiore inferiore subduplo majore. — Totus fungus 125-135 µ alt.

Hab. in Arthrolipe obscuro var. Sanctae-Balmae Ab., in Mauretania, Africa bor.

Cryptandromyces geniculatus Thaxt., Proc. Amer. Acad. 1912, p. 174. 4206
 Speg., Lab. Arg., fig. 45.

Hab. in elytris etc. C o n n o p h r i nov. sp., Temperley et La Plata Argent. — Sporidia majuscula  $28 \times 3.5$ ; perith.  $50.70 \times 25.30$ ; cellula pedunc.  $20.26 \times 8$ ; receptacul.  $26.35 \times 12.16$ ; appendix  $50 \times 9$ , longior  $130~\mu$ .

- 3. Cryptandromyces javanus Thaxt., Proc. Amer. Acad. 1915, p. 36. 4207 Hab. in insecto ex S c y d m a e n i d i s stirpe, Java (ROUYER).—Perith. 60-70  $\approx$  23-25, pes 20-40  $\mu$ ; appendix incl. pede 30-38; series antheridialis 28  $\mu$ ; receptac. 35-40; long. tot. ad apicem perithecii 100-120  $\mu$ .
- CUCUIOMYCES Speg., Lab. Arg., 1917, p. 506.— Laboulbeniineus peyritschiellaceus, Monoicomyceteis affinis; monoicus, receptaculum flabellatum, cellula basali obovata pluribus subbasalibus monostiche cineta efformatum: cellulae basales, altera intermedia interposita, androstichum et gynostichum geminato, extimae androstichum v. ramulum sterile fulcentes; androstichum e cellulis monostiche superpositis, superis et supremis paraphysatis, constitutum; antheridia solitaria cellula apicali androstichi inclusa, poro parvo inter paraphyses aperta; gynostichum e cellula pedicellari una basi nigro-ungulata; apice abrupte perithecium proferente, constans; perithecium plus minusve infuscatum cylindricum v. ovatum, saepius, transverse grosse denseque sulcatum, cellula basilari segmentoidea parum perspicua, nucleo ascogonico solitario, sporis linearibus excentrice 1-septatis hyalinis mucoso vaginatis in ascis subfusoideis geminatis.
- 1. Cucujomyces cylindrocarpus Speg., Lab. Arg. p. 507, fig. 46. Cel- 4209 lulae subbasales 7-9; androsticha subfusoideo-cylindracea 8-12 mera

apice parce breviterque paraphysata torulosa, septis crassis nigris; pedicelli peritheciales cylindracei ima basi breviter nigri ceterum hyalini utrinque modice attenuati, perithecia subanguste cylindracea basi nigra ceterum dense transverseque nigro-sulcata, apice conoidea ostiolo obtuso coronata.

Hab. in thorace B r o n t i s c h i l e n s i s, pr. lacum Nahuel-Huapi Neuquen, ex Museo Platensi.—Alt. tot. 300-350  $\mu$ ; perith. 150  $\times$  15 (sine ped.).

2. Cucujomyces elegans Speg., Lab. Arg. p. 508, fig. 47. — Cellulae 4210 subbasales paucae, saepius 3; androsticha subfusoidea sursum longe attenuata 5-6-mera subhyalina parcissime paraphysata; perithecia ovato-pyriformia fumosa transverse dense nigro-sulcata superne ostiolo conico obtusiusculo coronata, postice abrupte truncata atque pedicello hyalino recto cylindraceo basi non v. vix incrassato nigro-ungulato suffulta.

Hab. in elytris Brontis chilensis, pr. lacum Nahuel-Huapi, Neuquen, ex Mus. Platensi Argent. — Alt. tot. 350 400; perith. 60-75 \* 40-45 (sine ped.), pedic. 175-200 \* 15-18

3. Cucujomyces melanopus Speg., Lab. Argent. 510, fig. 48. — Cellu- 4211 lae basales paucae, saepius 3 parum perspicuae, androstichis subobclavato-fusoideis 8-10-meris hyalinis superne parce-tenuiterque comatis, pedicellis perithecialibus subcylindraceis sursum vix ampliatis deorsum elliptico-bulbosis, nigris opacis, bulbo excepto una basi tamen nigro-ungulato, perithecio elliptico-subovato pallido sulcis crassis nigris transversis notato ostiolo conico obtuso laevi coronato.

Hab. in margine abdominis Brontis chilensis, pr. lacum Nahuel-Huapi, Neuquen ex Mus. Platensi Argent. — Alt. tot. 300-325; perith.  $75-85 \times 18-22$ ; ped.  $150-175 \times 10-30$ .

4. Cucujomyces bilobatus Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 4212 p. 227. — Cellula basilari uniformiter obscure brunnea, distali concava et simulate biloba, cellula basilari perithecii hyalina subventricosa, parietibus fortiter incrassatis praedita. Perithecium: pedicello  $50 \times 15$ , coeterum cellula basali inclusa  $54 \times 22$ ; sporis  $25 \times 2,8$ ; appendicibus maximis  $50 \mu$ . Latitudo cellulae basilaris  $18-22 \mu$ , axis receptaculi secundarii ex apice  $60 \mu$  long.

Hab. in elytra? Cryptophagi sp., Aukland, Nova Zelandia.

Cucujomyces Diplocoeli Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 4213
 P. 276. — Cellula basali obscure brunnea translucida; pedicello pe-

1217

rithecii opaco; antheridio terminali simplici. Perithecium: appendix  $100\text{-}200 \times 7$ , basi bulboso usque  $18~\mu$  cr., cellulae regione basilari  $14 \times 18$ ; perithecium proprium  $50\text{-}56 \times 20\text{-}28$ ; sporis  $30 \times 3$ ; appendicibus  $35\text{-}70 \times 5$ .

Hab. in elytra Diplocoeli sp., Corral, Chile, America austr. — C. elegantissimo et C. melanopo proximus.

6. Cucujomyces stipatus Thaxter, Proc. Amer. Ac. of Sc. 54., 1918, 4214 p. 224. — Cellula basali magis longa quam lata obscure brunne-scenti; receptaculo ut in *Teratomyces*. Perithecio area opaca inclusa  $100-130 \times 18$ ; sporis circ.  $35 \times 3$ ; appendicibus longioribus e apice ramulorum  $50-70 \times 5$ ; totus fungus  $140-175 \mu$  long.; receptaculo circ.  $50 \times 28$  pede incluso.

Hab. in elytra Hyliotae Chilensis, Corral Chile, America austr. — Proximus C. cylindrocarpi.

7. Cucujomyces intermedius Thaxter, Proc. Amer. Ac. of Sc., 54., 1918, 4215 p. 223. — Cellula basali leniter suffusa, pedicello purpurascenti, saepe obscuro v. in parte superiori omnino opaco. Perithecio 38-  $45 \times 16 \cdot 18$ ; pedicello 175-300  $\times$  12; ramulis longioribus 100-125  $\mu$  long.; cellulis latioribus ramulorum usque  $8,5 \times 7.$ 

Hab. in Hyliota Chilensis, Corral Chile, Amer. austr.— C. eleganti Speg. proximum.

8. Cucujomyces curtipes Thaxt., Proc. Amer. Ac. of Sc. 54., 1918, 4216 p. 228. — Cellula basilari brunneo tincta, magis lata quam longa; pedicello perithecii abbreviato; perithecio subinflato uniformiter obscure brunneo. Pedicellum perithecii 18 × 10; corpus, inclusa regione cellulae basilaris, 60-66 × 22-28; sporis 35 × 3,5. Totus fungus e apice perithecii 95-105 μ long.; ramis primariis 50 μ long.; longitudo receptaculi secundarii e apice ramulis terminalibus 90 μ.

Hab. in elytra Liodes sp., Corral Chile, America austr. — C. Diplocoeli proximus.

SCELOPHOROMYCES Thaxt., Proc. Amer. Acad. 1912, p. 210. — Receptaculum primarium ex cellula basilari et subbasilari formatum, cellula subbasilaris ramulos laterales pluricellulares gerens et perithecio primario terminata, cellulae, subbasilari cellulae superpositae ramulos copiosos introrsum apiceque gerentes; perithecia secundaria e pede communi inferius orientia. Antheridia (?) simplicia et in ramulis inferioribus acrogena.

1. Scelophoromyces osorianus Thaxt., l. c. p. 211.

Hab. in abdomine et elytra Osorii sexpunctati, Pa-

lermo et Ins. Santiago La Plata, nec non in Osorii majuscula specie in Amazonia (MANN). - Perithecia 95-110 v 30-40; perithecii rami 25-120, cum cellulis basilaribus 130-250 µ long., regio basilaris 20.40 > 25.30; long. totalis ad apicem appendicis longioris 400 μ, sustentaculum 100-275 μ.

LABOULBENIOMYCETAE incertae sedis v. omnino dubiae et ad Phycomycetes etiam vergentes

CHANTRANSIOPSIS R. Thaxt., Bot. Gaz. LXIII (1914) p. 246. — (Etym. Chantransia ob habitum hujus algae). Entomophila. Filamenta firma, elastica, persistentia, crasse tunicata, hyalina, septata, varie caespitulosa, basi atra opaca (entomogenea) praedita, varie ramosa. Conidia solitarie acrogena, ovato-oblonga, basi truncata, continua, hyalina. - Nonnullae species habitus etiam Dematiaceo donatae.

1. Chantransionsis decumbens Thaxt., l. c. p. 248, t. XVIII p. 19-21. 4218 Divergens, decumbens, laxa, parce ramosa, hyalina; hyphis sursum tenuatis, 230-350 × 6, subspiralibus; conidiis oblongo-ellipsoideis v. subpiriformibus, 30-35 \* 9-11.

Hab. in parte inf. insecti ex Staphylinideis, Malang, Java (Royer).—Habitu procumbente imprimis dignoscenda species.

2. Chantransiopsis stipata Thaxt., l. c. p. 248, t. XVIII fig. 17-18. 4219 Hyphis dense confertis, erectis v. vix inflexis, rigidis, dense septatis, vulgo basi 1-ramosis e basi nigra entomogena oriundis, 110 ⋄ 5; conidiis tereti-oblongatis, apice rotundatis, basi truncatis, 25-32 \* 8.

Hab. in parte inf. insecti Staphylinoide i affinis Tachino, Java (ROYER). - Hyphis subrectis stipatis et conidiis angustis distincta species.

3 Chantransiopsis Xantholini Thaxt., l. c. p. 249, t. XVIII fig. 14-16. 4220 Hyphis densiuscule caespitosis, copiose ramosis, rectis v. leniter flexis, 70-175 \* 5-7, e basi nigra opaca entomogena oriundis; conidiis minusculis ovoideis v. oblongis, apice rotundatis, 10-18 > 5-6.

Hab. infer. superf. thoracis X antholini obsidiami, Fresh Pond, Cambridge Mass., Amer. bor. (THAXTER).

4. Chantransiopsis (Asteronycha) platensis Spegazzini, Obs. microbiol. 4221 in An. Soc. Cient. Argentina t. 85., 1918, Extr. p. 11, cum icon.-Cornulus subdiscoideus, polymerus, semilenticularis (8-12 µ diam.), cellula centrali majore atra opaca, marginalibus saepius 8 radiantibus minoribus (5 μ cr.) pallidioribusque cincta; hyphis ex cellulis

marginalibus, totis v. pro parte, enascentibus, 100-200 × 5-6, saepius unilateralibus, simplicibus v. parcissime subparalleleque ramosis, caudae cometae cujusdam subsimilibus, 10-20-meris, ad septa non v. vix constrictis, articulo supremo ex penultimo protrudente (Empusarum more) ac mox deciduo.

Hab. ad corporem Belonuchi hemorrhoidalis et Acaridorum, in cortice putrescenti Manihot carthagenensis, Santa Catalina Rep. Argentina, America austr.

5. Chantransiopsis (Tetrameronycha) bonaerensis Spegazzini, Obs. microbiol., in An. Soc. Cient. Argentina, t. 85., 1918, Extr. p. 9, cum icon — Cornulus fuligineus subopacus 3-septatus e fronte ellipticus 30-35 μ latus, e latere dimidiato lenticularis, 18-20 μ latus, superne sub apice lateraliter dehiscens ac hypharum fasciculum emittens; hyphis (10-30) filiformibus hyalinis 150-200 × 5-6 e basi confluentibus antice subpenicillatim expansis, saepius simplicibus 5-12 septatis, ad septa suprema tantum v. vix constrictis, articulus earum apicalis ex subapicali protrudens et caducus 16-20 × 6-8 (conidia v. sporae ?).

Hab. ad corporem Staphylinorum (Eleusis nigerrimus, Xantholinus subtilis, Lispinus tenellus), Dipteri Dilocapodidei cujusdam, in ramis Phytolaccae dioicae vigenti, Santa Catalina et La Plata, Rep. Argentina, America austr.

- AMPHOROMORPHA Thaxt., Bot. Gaz. LVIII (1914) p. 249. (Etym. amphora et morphe forma). Entemophila, e cellulis duabus involucro communi firmo obtectis constans, involucro apice perforato; sporae globoso-angulosae, in cellula superiori evolutae et per foramen involucri exeuntes. Stirps dubia, basi denigrata insectis inserta. Genus ambiguum, caracteres Chytridiacearum et Laboulbeniacearum ostendens.
- 1. Amphoromorpha entomophila Thaxt., l. c. p. 251, t. XIX f. 26-28.— 4223 Pallide flavo-brunnea, translucens, amphoriformis, in rostellum breve obtusum apicale producta, tota 110-130  $\mu$  longa, corpore 70-105  $\approx$  28-31, rostello 14-17  $\approx$  7,5-8, pedicello 35  $\approx$  17; sporis conglomeratis, 4  $\mu$  eirc. diam.

Hab. in setulis Diochi conicollis, Manilla Ins. Philipp., ubi aliae formae magis imperfectae occurrunt in Staphilinidis; efr. l. c. t. XIX f. 20-31.

2. Amphoromorpha blattina Thaxter, Bot. Gazette 69., 1920, p. 20, 4224

tab. IV fig. 44. — Flavescens, sessilis pede lato obscuro praedita; forma elongato-ovoidea, apicem versus parum latiori, apice rotundato; sporis 50-100, circ. 5  $\mu$  diam.; sporogonio 55-70  $\times$  18-20, pede 18-22  $\times$  18, e fronte viso.

Hab. ad antennas Blattiae cujusdam ignotae, Grand Etang Grenada. — Amph. mediae proxima.

- AMPHOROPSIS Spegazzini, Obs. microbiol. in An. Soc. Cient. Argentina t. 85., 1918, Extr. p. 4. Perithecium plus minusve ellipsoideum sursum rotundatum v. vix obsolete umbonatum, deorsum cuneatum sessile v. pedicellatum ungue valido nigro substrato adfixo, intus omnino sporis repletum, basi sterili plane nulla; sporae ameboideae e mutua pressione angulosae saepius octonae. Ab Amphoromorpha Thaxt., differt peritheciis apice obtusis et basi intus sterili.
- 1. Amphoropsis minuta Spegazzini, l. c., fig. 1. Peritheciis subellip- 4225 soideis apice obsolete umbonatis, deorsum breviter sed manifeste cuneato-pedicellatis (pedicellum cum ungue  $10 \times 5$ ), laevibus, hyalinis,  $45 \times 10$ ; sporis enucleatis.

Hab. ad tarsos et ungues parvi Histeri sp., in truncis putrescentibus Palmarum, La Plata Rep. Argentina, America austr.

2. Amphoropsis subminuta Spegazzini, l. c. Extr. p. 5, fig. 2. — Peri-4226 theciis ellipsoideo-clavulatis (sine ungue 45.50 \* 13), apice modice sed patenter umbonatis, deorsum cuneatis sed omnino sessilibus, levibus, hyalinis; sporis plerumque distincte uninucleatis.

Hab. ad pilos abdominis et ad ungues posteriores Echiasteris de pressi et melanuri, La Plata Rep. Argentina, America austr.

3. Amphoropsis media Spegazzini, l. c. Extr. p. 5, fig. 3. — Peritheciis 4227 ex ellipsoideo-clavulatis, apice omnino exumbonatis, basi abrupte coarctatis et in pedicellum brevem sed eximie distinctum productis, levibus, hyalinis, 75 \* 18-20; sporis majusculis, parce angulosis enucleatis.

Hab. ad pilos Clivinae longipennis, in ins. Santjago prope La Plata, America austr.

MYRIAPODOPHILA Spegazzini, Obs. microbiol., in An. Soc. Cient. Argentina t. 85., 1918, Extr. p. 5. — Perithecium lineare sursum sensim attenuatum, basi abrupte coarctatum atque in pedicellum tenuem ungue crasso suffultum productum, basi sterili nulla, sporis ameboideic angulosis.

- 1. Myriapodophila argentinensis Spegazzini, l. c., Extr. p. 6, fig. 4. 4228 Tota hyalina; peritheciis subsigmoideis (75-125 \* 12-16, absque pedet ung.), levibus tenuiter tunicatis, pedicello geniculato-subhorizontali brevi tenui fultis; sporis majusculis angulosis, enucleatis. Hab. ad pilos et ungues parvae Scolopendrae sp. in ins. Santjago prope La Plata, Rep. Argentina, America austr.
- THAXTERIOLA Spegazzini, Obs. microbiol., in An. Soc. Cient. Argentina t. 85., 1918, Extr. p. 6. Corpus fusoideus-sublineare, sursum in rostrum elongatum rectum v. curvulum productum postice modice attenuatum, sessile v. breviter pedicellatum, ungue nigro bene evoluto suffultum; intus septis 2 transversis trimerum, articulum supremum sporis amoeboideis paucis monostichis repletum.
- 1. Thaxteriola infuscata Spegazzini, l. c., Extr. p. 7, fig. 5. Parva, 4229 40-45 × 4.5, fusco-plumbea, per aetatem saepius atra, rostro parum arcuato et pedicello brevissimo semper tamen subhyalinis, septis internis sat approximatis; sporis parvis, irregulariter cuboideis, hyalinis.

Hab. frequens ad antennas Labiae minoris et Philonthi convexicollis, prope La Plata, nec non ad pilos Belonuchi haemorroidalis, Santa Catalina, Rep. Argentina, America austr.

2. Thaxteriola subhyaiina Spegazzini, l. c. Extr. p. 7, fig. 6. — Tota 4230 et semper hyalina v. subhyalina, pusille (20 \* 3), rostro valde arcuato, septis internis sat remotis.

Hab. ad marginem antennarum Aphodii granarii et lividi, prope La Plata, Rep. Argentina America austr.

3. Thaxteriola nigromarginata R. Thaxter, Bot. Gazette 69., 1920, p. 15, 4231 tab. IV fig. 37-38. — Subsigmoidea, basin et apicem versus hyalinis exceptis, pallide brunnescenti, versus medium macula nigra praedita, cellula basilari longitudine dimidium totius fungi aequante; totus fungus 62-68 μ long., 8-8,5 μ latus in parte latiori cellulae basilaris.

Hab. ad pila Staphylinid arum, Samarang Java.

ENDOSPORELLA R. Thaxter, Bot. Gazette, 69., 1920, p. 16 (Etym endos intus et spora). — Axis e quatuor cellulis superpositis efformatum, basilari infra pedicelliformi angustata, terminali mucrone elongato praedita, intus sporidia e basi efformantia uniseriata, apice exeuntia.

1. Endosporeila Diopsidis Thaxter, l. c. tab. IV fig. 39-41.— Pede parvo, 4232 nigro acuminato; cellula basali infra angustata et hyalina oblique brunneo-nigrescenti; cellula secunda et tertia brevioribus subaequalibus v. superiori parum majori, terminali seu sporogonio longiori dimidium longitudinis totius fungi quandoque subaequante nigro maculato, apice mucrone deciduo et ostiolo hyalino aperta; totus fungus 100-150 × 10-12, sporogonium 50-60 × 10-12.

Hab. ad crura Diopsidis sp., Kamerun Africa occ. — Gen. Thaxteriolae affine.

- LABOULBENIOPSIS R. Thaxter, Bot. Gazette, 69., 1920, p. 17 Axis simplex, pede distincto, collo bicellulari et sporogonio definito terminato; sporidia hyalina minuta, apice exeuntia. Genus hoc Thaxteriolae et Endosporellae verisimiliter affinis, et cum Gen. Entomocosma Speg. gregem Thaxteriolarum efformans.
- 1. Laboulbeniopsis termitarius Thaxter, l. c. p. 17, tab. IV fig. 42-43.— 4233 Pede et sporogonio pallide brunnescentibus, collo subhyalino; pede lato extus fortiter convexo, uno latere nigro maculato, infra plus minus acuminato; sporogonio collo subaequante v. longiore, recto, subsymmetrico, infra leniter inflato, ibique duobus cellulis parum distinctis praedito, apicem versus sensim attenuato circa porum constrictulo; totus fungus 100-130 μ long., sporogonio 45-50 × 12, collo 45-50 × 8-10, pede 25 × 12, sporidiis 3,5-4 × 2,5.

Hab. ad apicem cruris Eutermitis morionis var. St-Luciae, Grand Etang Grenada.

- ENTOMOCOSMA Spegazzini, Obs. microbiol., in An. Soc. Cient. Argentina, t. 85., 1918, Extr. p. 7. Receptaculum dimerum appendicem oligomeram perithecium v. antheridia fulcentem coronatum, ungue nigro matrice adfixo; antheridia? subcymbiformia rostratula superposita; perithecium? acrogenum parvum pyri-v. lageniforme, sporis paucis amoeboideis irregulariter subglobosis repletum.
- 1. Entomocosma laboulbenioides Spegazzini, l. c. Extr. p. 8, fig. 7. 4234 Parvula, tota 75-125 × 10-14, hyalina v. vix straminea, perithecium cellulis binis superpositis fultum, antheridia 3-6 superposita cellula unica insidentia.

Hab. praecipue ad pilos, totius corporis Cercyoni variegati, prope La Plata, Rep. Argentina, America austr.

COREOMYCETOPSIS R. Thaxter, Bot. Gazette, 69., 1920, p. 13 (Etym.

- a Coreomyces cui simile). Axis e cellulis superpositis efformatum; cellula basilari majori inflata pedicelliformi; cell. terminalibus demum ob septa evanida sporoforum efformantibus; sporidia numerosa apice emissa.
- 1. Coreomycetopsis oedipus Thaxter, l. c., tab. IV fig. 32-36. Hyali- 4235 nus v. flavescens; pedicello inflato infra acuminato concolori; cellulis 10-15 superpositis ultimis e sexta v. septima proliferis; sporoforo subfusoideo v. obelavato; totus fungus 100-135 μ long., sporogonium 45-60 × 12-15, pedicello 25 × 12-15, sporidia elongato-ovoidea 8-9 × 2-2,5.

Hab. ad crura Eutermitis morionis var. St. Luciae, Grand Etang Granada.

# PYRENOMYCETÆ FR. EM.

Syll. I p. 1, IX p. 364, XI p. 252, XIV p. 462, XVI p. 398, XVII p. 524, XXII p. 19.

# Fam. 1. Perisporiaceæ

Caracteres et dispositionem secundum SPEGAZZINI (in « Physis », t. IV. 1918. p. 281: Perisporiales), comparationis causa tantum ostendimus.

- I. ERYSIPHEAE Lév. Biophilae subiculo mucedineo, perithecia astoma, parenchymatica, singula, semper v. juventute pallida.
- Hyalosporae: Erysiphe Lév., Microsphaera Lév., Phyllactinia Lév., Podosphaera Lév., Sphaerotheca Lév., Uncinula Lév.
- II. EUROTIEAE (Sacc.) Saprophilae, subiculo mucedineo, perithecia astoma, parenchymatica, singula, pallida.

Hyalosporae: Cryptothecium P. S., ? Cystotheca B. et C., Allescheria Sacc. et Syd. Eurotium Lnk.

Phaeosporae: Penicilliopsis Solm., Laaseomyces Ruhl.

Hyalodidymae: Chilemyces Speg.

III. PERISPORIEAE (Sacc.). — Saprophilae, subiculo dematiaceo, perithecia astoma, parenchymatica, singula, nigricantia.

Hyalosporae: Anixia Fr., Anixiopsis Hug., Apiosporium Knz., Micromastia Speg., Polysporidium Syd.

Phaeosporae: Arachnomyces Mass. et Sal., Ascotricha Rbh., Cephalotheca Fuck., Chaetomidium Zpf., Chaetotheca Zkl., Magnusia Sacc. Orbicula Ckc., Pleuroascus Mss. et Slm., Thielavia Zpf.

Hyalodidymae: Pampolysporium Mgn.

Phaeodidymae: Argynna Mrg., Marchaliella Wut., Testudina Bizz., Wentiomyces Koord., Zopfia Rbh. (= Richonia Boud.).

Phaeophragmiae: Perisporium Fr.

Phaeodictyae: Ceratocarpia Roll., Cleistotheca Zkl.

IV. MELIOLEAE Speg. — Biophilae, subiculo dematiaceo, perithecia astoma parenchymatica, singula, nigricantia.

Hyalosporae: Meliolopsis Spg. (= Sacc.) (cum spec. Apiosporii biophilis), Pilgeriella Hung. (= Guignardiella Sacc. et Syd.), Samarospora Rstr. Hyalodidymae: Dimeriella Speg., Dimerina Thsz., Neorehmia v. Höhn.

Phaeodidymae: Alina Reb., Balladyna Reb., Dimerium Sacc. et Syd., Kusanebotrys Hng., Parodiella Speg. (= Maireella Syd.), Phaeodimeriella Speg. (= Thsz.), Winteromyces Speg.

Hyalophragmiae: Zukalia Sacc., Trichomerium Speg. n. gen.

Phaeophragmiae: Euantennaria Speg. n. gen., Ceratosperma Speg. n. gen.,
Meliola Fr., Perisporina Hng., Schenckiella Hng.

Phaeodictyae: Pleomerium Speg. n. gen.

Scolecosporae: Ophiomeliola Strb.

V. LASIOBOTRYEAE. — Biosaprophilae, subiculo plus minus evoluto, dematiaceo, stromata superficialia discoidea, perithecios astomos parenchymaticos globosos gerentia efformante.

Phaeodidymae: Lasiobotrys Knz.

Hyalophragmiae: Paropsis Speg. n. gen.

: Scyphostroma Strb.

VI. ENGLERULAEAE P. Henn. — Biophilae, subiculo mucedineo plus minus evoluto, perithecia subglobosa, subastoma, anhista, singula, subnigricantia.

Hyalosporae: Hyalodermella Speg. n. gen.

Didymosperae: Dimeriosporiella Speg., Englerula Hng., Hyalotheles Speg., Schiffnerula v. Höhn.

Phragmosporae: Hyaloderma Speg.

Scolecosporae: Saccardomyces Hng., Leptascospora Speg. n. gen.

VII. CAPNODIEAE Sacc. — Biophilae, subiculo membranaceo, perithecia ostiolata, parenchymatica v. prosenchymatica, singula, nigricantia.

Conspectus generum Capnod., seu nova dispositio syst. secund. Cl. Spegazzini, suo loco conferenda.

## Subfam. 1. Erysipheæ Lév.

PODOSPHAERA Kunze. - Syll. I p. 2, IX p. 364.

1. Podosphaera Myrtilli J. Dufrenoy, Bull. Soc. Mycol. de Fr., XXXV, 4236 1919, p. 35. — Descriptio nulla; nomen nudum ad interim.

Hab. in pagina inferiore foliorum Vaccinii Myrtilli (Ericaceae), « Tourbières du Lienz », 1400 m. alt., Gallia.

UNCINULA Lév. — Syll. I p. 6, IX p. 366, XI p. 252, XIV p. 462, XVI p. 399, XVII p. 524, XXII p. 21.

Uncinula geniculata Gerard. — Syll. I p. 8 — var. carpinicola K. Hara, 4237
 Journ. Forestry Asso. Japan, Tokyo, t. IV, 1915, n. 382, p. 62,
 cum icon.; Mycologia 1919, p. 80. — A typo recedit vegetatione

amphigena, peritheciis multo minoribus (70-100  $\mu$  diam.), appendicibus longioribus (150-440  $\approx$  6-7), ascis 6-8, sporis 15-20  $\approx$  9-11.

Hab. in foliis Carpini (Betulaceae), loco ignoto Japoniae.

2. Uncinula necator (Schw.) Burr. — Syll. I p. 8 (U. americana) — var. 4238 Actinidiae K. Hara, Journ. Forestry Asso. Japan, Tokyo, t. IV, 1915, n. 392, p. 63, cum icon. — U. Actinidiae Miyabe in Salmon Mon. Eris. 1900, p. 101 (nomen nudum); Mycologia, 1919, p. 81. — A typo praecipue recedit appendicibus brevioribus et robustioribus, 100-250 μ long., 6-8 μ cr., subrigidis, basi distincte inflatis, 9-13 μ diam.; ascis typice apiculatis.

Hab. in foliis Actinidiae polygamae et A. Kolomiktae (Dilleniaceae), loco ignoto Japoniae.

3. Uncinula curvispora K. Hara in litt. ad Tanaka in Mycologia 1919, 4239 p. 80, Unc. septata Salm., Syll. XVI p. 400 XVII p. 524 — var. curvispora K. Hara, Journ. Forestry Asso. Japan, Tokyo, t. IV, 1915, n. 392, p. 62. — Caespitulis obsoletis hypophyllis, tenuissime membranaceis evanidis; peritheciis punctiformibus, sparsis, depresse discoideis v. conspicue inflexis, 170-220 μ diam., nigris; contextu membranaceo, irregulariter celluloso, cellulis quandoque plus minus radiantibus, 4-8 μ cr.; fulcris numerosis, 200-300, filiformibus, simplicibus, levibus, tenuiter tunicatis 35-200 μ long., medio 4-11 septatis, infra brunneo-flavescentibus, 6-7 μ cr., apicem versus hyalinis sensim attenuatis ibique 2-2,5 μ cr. et spiraliter incurvatis; ascis 3-5, ellipsoideis v. ovoideis, apice rotundatis, infra apiculatis, tunica crassiuscula sed fragili, 65-75 \* 37-50; sporis 4-5, ellipsoideis, ovoideis v. ovoideo-reniformibus, utrimque rotundatis, flavescentibus, contextu granuloso, 28-35 \* 12-15 raro 45 \* 18.

Hab. in foliis Fagi silvaticae var. Sieboldi (Fagaceae), loco ignoto Japoniae. — Caracteribus peritheciorum ad novum subgen. (Asterothecia) adscribenda species.

4. Uncinula Pterocarpi Doidge, Trans. R. Soc. South Africa, v. V, P. III, 4240 1915, p. 240, tab. XXXII. — Amphigena; mycelio epiphyllo dense arachnoideo, latissimo per totam matricem effuso, cretaceo v. flavidulo, persistenti; mycelio hypophyllo tenui, effuso, albido; peritheciis numerosissimis, dense gregariis v. plus minusve sparsis, primo luteis, subglobosis, dein castaneis v. atro-brunneis, globosis depressis, 100-120 μ diam., plerumque ca. 114 μ, cellulis obscuris; appendicibus numerosis, 50-75, saepissime ca. 60, perithecii diametrum leniter superantibus, longitudine varia in quoque perithecio, simplicibus, eseptatis, rectis v. leniter curvulis, 3-5 μ latis, sur-

sum non incrassatis, apice uncinatis v. saepe subhelicoideis, hyalinis, basi demum crasse tunicatis; ascis 8.12, ovatis, 45.50 × 20.28, basi breviter pedicellatis, curvulis, 4-sporis; sporidiis ellipsoideis hyalinis, 13.18 × 12.13.

Hab. in foliis vivis Pterocarpi cerisei (Leguminosae), Duivelskloof, Zoutpausberg Dist., Transvaal (E. M. Doidge) — U. Tectonae affinis.

5. Uncinula aspera Doidge, Trans. R. Soc. South Africa, v. V, P. III, 4241 1915, p. 240, tab. XXXIII. — Epiphylla; mycelio arachnoideo, late effuso, albido, subpersistente; peritheciis sparsis, atro-brunneis, globosis depressis, 90-105 μ diam., cellulis distinctis, ca 15 μ latis; appendicibus 15-30, rectis v. leniter curvulis, simplicibus, eseptatis, tenue tunicatis, totis hyalinis, basi 5-6 μ latis, asperulis, sursum incrassatis usque 9 μ, apice uncinatis v. interdum helicoideis, perithecii diametrum leniter superantibus 125-165 μ longis; ascis 4-6, ovatis v. subglobosis, sessilibus, 51-57 \* 45-48, 4-6-sporis; sporidiis 18-21 \* 13-14.

Hab. in foliis Fici sp. (Moraceae), Wonderboom, Pretoria Dist.,
 Transvaal (J. BURTT-DAVY). — U. Salicis affinis.

6. Uncinula Salmoni H. et P. Sydow, Ann. Mycol. XI, 1913, p. 114.— 4242 Unc. Sengokui Salm. forma, Ann. Mycol. 1906, p. 244. — Peritheciis amphigenis, mycelio subpersistenti tenuissimo effuso insidentibus, 85-120 μ diam., cellulis parietis exterioris 10-14 μ lutis; appendicibus 9-21 in quoque perithecio 100-170 μ long., rectis v. lenissime curvulis, simplicibus, hyalinis, eseptatis, rigidis, parte basali 6-7,5 μ latis, sursum versus non v. leniter latioribus, ad apicem dense convolutis subinde fere helicoideis haud inflatis; ascis 4-6 in quoque perithecio, subglobosis v. late ovoideis, 45-50 × 28-30, pedicello brevissimo; sporis plerumque 4-6 raro 3 vel 7, ellipsoideis, utrinque rotundatis, 17-19 × 10.

Hab. in foliis Fraxini Bungeanae DC. var. pubescentis Wg. (Oleaceae), Kurokawa prov. Ugo, Japonia bor. (M. MIURA).

7. Uncinula Koelreuteriae Miyake, Bot. Magaz. Tokyo XXVII (1913) 4243 p. 39, tab. 1 fig. 1-3 et XXVIII (1914). — Mycelio epiphyllo, tenui; peritheciis sparsis, atris, hemisphaericis, 150-300 μ diam. excipulo e pseudocellulis 8-16 μ diam. constituto, appendicibus copiosis, ultra 100 ornatis, appendicibus hyalinis, lumine vix visibili, continuis, rectis vel subundulatis, apice tenuatis et spiraliter breve involutis, 24-35 × 7-12; ascis in quoque perithecio circa 20, obovatis,

longe ellipsoideis vel irregularibus, brevissime crasseque pedicellatis, 64-100 × 34-48, apice tunica tenuiore, typice octosporis; sporidiis ellipsoideis, raro ovatis, e hyalino viridulis, intus minute granulosis et grosse 1-2-guttatis, 15-18 × 10-13.

Hab. in foliis Koelreuteriae bipinnatae (Sapindaceae), prope Peking, China. — Inter excipulum et ascos adest mycelium septatum paraphysioideum.

- LEVEILLULA Arnaud, Ann. Service Epiphyt. t. 7., 1919-1920, p. 92, 4244 94, 108, cum icon. Perithecia ut in Erysiphe, status conidicus mycelio interno donato et conidia gen. Oidiopsis. Typus generis Leveillula taurica (Lév.) Arnaud.
- TYPHULOCHAETA S. Ito et Hara in Bot. Mag. Tokyo, XXIX (1915) p. 20 (Etym. Typhula et chaete, seta). Mycelium superficiale, haustoriis in cellulas epidermicas matricis penetrantibus. Perithecia globosa v. globoso-depressa, astoma, omnino erysiphacea. Asci plures, 8-spori; sporidia ellipsoidea continua, hyalina. Appendices perithecii indivisae, clavatae, hyalinae.
- 1. Typhulochaeta japonica S. Ito et Hara, l. c. p. 20 tab. I. Hypo- 4245 phylla, tenuis, persistens; peritheciis sparsis v. subgregariis, globosis v. globoso-depressis, 120-200 μ diam., cellulis contextus 10-20 μ diam.; appendicibus numerosis (90-160), supra medium perithecii anulatim egredientibus, indivisis, clavatis, apice rotundatis, crasse tunicatis, hyalinis, 45-65 × 10-15; ascis 5-13 ovoideis, oblongo-ovoideis, v. ellipsoideis, breviter pedicellatis, 90-97 × 40-45; sporidiis normaliter octonis, rarius senis, oblongo-ellipsoideis, hyalinis v. dilute flavidis, granulosis, 18-36 × 12-18.

Hab. in foliis Quercus glanduliferae (Fagaceae), pr. Mino Kawanye, Japoniae. — Conidia nondum cognita.

Subfam. 2. — Eurotieæ Sacc. (Aspergilleae, v. Plectascineae p. p.)

**EUROTIUM** Link. — Syll. I p. 95, IX p. 37, XI p. 254, XVI p. 1123, XVII p. 527, XXII p. 25.

Eurotium subgriseum Peck, N. Y. State Mus. Bull. 150 [1910] p. 30 4246 (1911). — Peritheciis minutis, 100-125 μ diam., dense caespitosis, globosis vel subglobosis, flavis, sporidiis globosis, flavo-viridibus, 6-8 μ diam. — Status conidicus Aspergillus subgriseus Peck. — Syll.

XIV p. 1046 — conidiophoris 100-125  $\mu$  altis, 7-8  $\mu$  crassis, in vesiculam subglobosam 30-40  $\mu$  diam. productis; conidiis catenulatis, subhyalinis, minutis, 3,5-4  $\mu$  diam.

Hab. ad ligna emortua et in cortice Platani, Brooklyn N. Y., Amer. bor.

 Eurotium herbariorum (Wigg.) Lnk. — Syll. I p. 26. — var. megalospora Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23. 1919, Extr. p. 87. — A typo differt ascis (16-18 μ diam.) sporidiisque majoribus (8 μ diam.), minutissimeque reticulatis.
 Hab. ad ramulos udos dejectos in silvis propo A picky. A merica

Hab. ad ramulos udos dejectos in silvis prope Apiahy, America austr. (J. PUIGGARI).

3. Eurotium Desmazieri Cast., Suppl. Cat. pl. Mars. II p. 56 (1851).— 4248 Gregarium, minutissimum, tomento raro; peritheciis sulphureis.

Hab. in foliis emortuis Mori albae pr. Marseille, Galliae. — Teste auctore, videtur distingui ab Eurotio herbariorum minutie, subiculo subnullo, peritheciis interne coloratis. An ergo potius Eurotium repens De Bary (1871), quod vero posterius?

4. Eurotium coriorum Wallr. — Syll. I p. 27 — var. gelatinicola Speg., 4249 Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII p. 34 (1912). — A typo praecipue recedit sporidiis cospicue majoribus. — Perithecia globosa, 100·150 μ diam., sulfurea, subiculo ex hyphis hyalinis, 2-4 μ cr., per aetatem crustula rufescente obductis, densiuscule intertextis, ramulosis efformato insidentia; asci subglobosi 14-18 × 14-16; sporidia sphaerica 7-8 μ diam., levia vel subtilissime verrucosa, areola mucosa tenui mox evanida circumdata.

Hab. ad superficiem gelatinae glycerinatae diu loco udo servatae, La Plata, Argentina.

5. Eurotium verruculosum Vuillemin, Bull. Soc. Myc. de Fr. XXXIV, 4250 1918, p. 83, fig. 1-17. — Effusus, hyphis sterilibus repentibus, septatis, hyalinis; conidiophoris erectis, parce septatis, ab imo dilatatis, summo usque ad 22 μ latis; vesicula oblonga, 20-40 μ diametro; phialide-claviformi, 13-17,5 × 6,6-7,6, basi constricta; conidiis subglobosis, peripheria verruculosis, basi levibus, summo convexis, vel disjunctore ornatis, 9,5 × 9,5 vel 10 × 8-9; vesiculae, phialides, conidia plus minus fuliginea. Perithecia sulphurea, 120-200 μ diametro, appendicibus destituta; ascis rotundatis, 18-20 μ, octosporis; ascosporis lenticularibus, 9-9,5 × 7,4-7,6, hyalinis, verruculosis rotundatis ornatis, quae longe a polis evanescunt et interdum marginem non sulcatam invadent.

Hab. in dauco cocto, in officina botanica nanceianae universitatis, Gallia.

#### ARACHNOMYCES Massee et Salm. - Syll. XVII, p. 532.

1. Arachnomyces flavidulus Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4251 Buenos Aires, XXIII p. 35 (1912). — Sparsus, superficialis, sulfureus, matrici arcte adnatus; subiculo tenuissimo, mox evanescente, laxissimo, ex hyphis laxe irregulariter ramosis, gracilibus, 1,5-2 μ cr., hyalinis efformato; peritheciis sparsis, globosis vel globoso-depressis, 250-500 μ diam., flavis, fragilibus, densiuscule tomentosis, tenuissime membranaceis, contextu flavidulo indistincto, ostiolo plane nullo; ascis subglobosis, minutis, conglobatis, 12 μ diam., octosporis, cito diffluentibus; sporidiis e globoso ellipsoideis, tenuissime tunicatis, levibus, 4 × 3.

Hab. ad folia sternata subputrescentia Eucalypti globuli (Myrtaceae), in Parque La Plata, Argentina. — Species ut videtur, Eurotio? chilensi Mont. affinis sed rite distincta.

**CEPHALOTHECA** Fuck. — Syll. I p. 36, IX p. 377, XIV p. 465, XVI p. 407, XXII p. 30.

1. Cephalotheca abellinensis Sacc., Notae Mycol. XXIV p. 28 (Bull. 4252 Orto bot. Napoli 1918). — Peritheciis laxe gregariis, superficialibus, globulosis, nigricantibus, minutis, 180-200 μ diam., vertice rotundatis, astomis (\*\*); contextu parenchymatico, rufescenti praeditis, setosis; setulis rigidulis, simplicibus, rectis, acutis, continuis, basi vix incrassatis, rufo-fuligineis, sursum dilutioribus, 180 × 18 (basi); ascis globosis, sessilibus, 18-22 μ diam., 6-8-sporis, aparaphysatis; sporidiis globulosis, conglobatis, 6 μ diam., levibus, fuligineis.

Hab. in ligno denudato, udo Coryli Avellanae (Betulaceae), Avellino, Ital. merid. — Habitu rigescenti a ceteris generis speciebus descisit.

DICHLAENA (Dur. et Mont.) em. Maire, Bull. Soc. Hist. Nat. Afr. du Nord 1917, p. 159. — Cfr. Syll. III p. 620. — Mycelium floccosoradiatum, floccis raris, conidiis (ut videtur) nullis. Perithecia vitellina e tunica duplici composita, utraque membranaceo-cellulosa exterior tandem saepe prope basim circumscissa crepulam relinquens, interior vero tenuissima. Asci inordinati subglobosi, octospori; sporidia simplicia hyalina, capillitium nullum.

1. Dichlaena Lentisci Mont. et Dur. emend. Maire, Bull. Soc. Hist. Nat. 4253

Afr. du Nord, 1917 p. 159. — Cfr. Syll., l. c. — Hypophylla, rarius epiphylla, e flavo vitellina; perithecio exteriori subgloboso minute celluloso, basi brevissime radiatimque floccoso, tandem saepe circumscisso, interiori tenuissimo, venis laxe anastomosantibus saepe percurso; ascis subglobosis, 8-sporis, 8-10 × 7-8; sporidiis subglobosis v. breviter ellipsoideis, levibus, 1-guttulatis, 3-4 × 3.

Hab. in foliis delapsis Pistacia e Lentisci (Sapindaceae) in Mauretania, Afr. bor.

- PERISTOMIUM Eckley Lechmere, Compt. rend. Acad. Sci. Paris 155 (1912) p. 178, Bull. Soc. Myc. de Fr. 1913, p. 307. [A gen. Chaetomium vix diversum peritheciis levibus nec setulosis].
- 1. Peristomium desmosporum Eckley Lechmere, l. c., et Bull. Soc. Mycol. Fr. 1913, p. 307-328, f. 2-12, t. XX et XXI. Peritheciis membranaceis, sphaericis, atris, superficie mycelii enatis, laevibus pilisve simplicibus valde irregulariter dispositis ornatis, ostiolo apicali praeditis; ascis, paraphysibus non immixtis, membrana tenuissima maturescenti-dilabente tunicatis; ascosporis octonis, brunneis; conidiis oidiisve secundum varietatem; peritheciis 160-200 μ diam. longas ascosporarum catenas emittentibus; ascis sphaericis ellipticisve, 14-16 μ diam., 8-sporis; ascosporis utraque fine leniter aculeatis 5,4 μ longis. Var. Oidium: Oidiis sporisve intercalaribus secus hyphas enatis, fere atris, pro more, 8 μ long., 5 μ lat. Var. Verticillium: conidiis ut in Verticillio nascentibus, sphaericis, laevibus, brunneis 4 μ diam.

Hab. in silvis primaevis regionis Côte-d' Ivoire nuncupatae, Africae occidentalis (A. CHEVALIER).

### Subfam. 3. Engleruleæ P. Henn.

Dispositio syst. generum secundum F. Theissen, Verh. zool.-bot. Ges. Wien, Bd. 66., 1916, p. 322, et Theissen et Sydow, Ann. Mycol. 15., 1917, p. 467.

A. Perithecia parenchymatica, cellulis demum evanidis

- I. Perithecia insidentia polyasca
  - a) Mycelium exhyphopodiatum
    - a Sporidia bilocularia
      - 1. Hyalina. . . . . . . . 1. EUTHRYPTON Theiss.
      - 2. Brunnea . . . . . 2. ENGLERULA P. Henn.

요. 속 이 그렇게 하는 이번 이번 사람들은 맛이 먹었다.
230 Pyrenomycetæ, Perisporiaceæ, Englerula.
β Sporidia quadrilocularia hyalina 3. Theissknula Syd.
γ » 5-plurilocularia, filiformia . 4. HYALODERMA Speg.
b) Mycelium hyphopodiatum
α Sporidia bilocularia hyalina 5. SCHIFFNERULA Theiss.
$\beta$ » brunnea , 6. Phancoschiffnerula Ths.
II. Perithecia persistenter pedicellata, monasca . 7. Thrausta Theiss.
B. Perithecia hyphis meridianis donata
I. Mycelium nullum
1. Asci infra filamenta paraphysoidea mucosa
immersa. Sporidia hyalina unilocularia
(matura plurilocularia?) 8. SINTEXIS Theiss. 2. Filamenta paraphysoidea nulla. Sporidia
phaeodidyma 9. RHIZOTEXIS Th. et Syd.
II. Mycelium parcum; strato ascigero capsula mucosa anhista vestito
1. Paraphyses nullae; sporidia hyalina muralia 10. Nostocotheca Starb.
2. Paraphyses praesentes; sporidia filiformia 11. OPHIOTEXIS Theiss.
III. Mycelium copiosum; perithecia fortiter incru-
stata; hyphae persistentes, circa perithecia
stratum intricatum enformantes; paraphy- ses nullae; sporidia bilocularia brunnea
1. Mycelium setulis destitutum; perithecia
polyasca 12. PARENGLERULA v. Höhn.
2. Mycelium setulosum; perithecia monasca 13. Linotexis Syd.
Genera dubia: Dimerosporiella Speg., Hyalotheles Speg.
EUTHRYPTON Theiss., Verh. zool bot. Ges. Wien, Bd. 66, 1916, p. 306

EUTHRYPTON Theiss., Verh. zool bot. Ges. Wien, Bd. 66, 1916, p. 306 (Etym. a euthryptos, quia perithecia facile evanida). — Mycelium superficiale, ramosum, septatum, exhyphopodiatum, pallidum, non setulosum. Perithecia globosa astoma, evanida. Asci numerosi, ovoidei, aparaphysati, in muco immersi, octospori. Sporidia bilocularia hyalina.

1. Euthrypton globiferum (Ell. et Ev.) Theiss., l. c.— Ita vocanda est 4255 Asterina globifera Ell. et Ev. — Syll. XIV, p. 696.

# ENGLERULA P. Henn. - Syll. XVII p. 529, XXII p. 26.

Englerula mexicana Theissen in Sacc., Ann. Mycol. XII, 1914, 4256
 p. 301. — Mycelio hyphopodiis destituto, irregulariter effuso, tenui, hyphas Asterinae Verae-crucis ambiente, ex hyphis irregulariter ramosis, stramineis tenuiter septatis, 2,5-3,5 μ cr. flaccidis compo-

sito; peritheciis ad hyphas sessilibus, fuscis v. stramineo-fuscis ex cellulis angulatis 6-8 µ diam., parenchymatice efformatis, contextu tamen mox indistincto (cellulis mucose secedentibus), extus muco indurato minime obtectis, intus muco hyalino impletis; ascis fasciculatis aparaphysatis, clavato-cylindraceis, 8-sporis; sporidiis distichis fusco-brunneis v. violaceo-brunneis, oblongis, medio septatis, utringue rotundatis, 16 × 6, cellula superiore paullo latiore.

Hab. in foliis subvivis Laurineae cujusdam (Litsaeae?). Veracruz Mexico (S. Bonansea). — Socia adest Asterina Verae-crucis Theiss. An Asterina insignis Karst. et Roum., in Laurineis, hanc et Asterinam Verae-crucis Theiss. confuse complectitur?

2. Englerula Strewiae Theiss., Verh. zool.-bot. Ges. Wien Bd. 66., 1916, 4257 p. 327. — Mycelio maculas 0,5 1 cm. diam. quandoque confluentes obscuras efformante; hyphis obscuris, reticulato-ramosis, exhyphopodiatis, 3.3,5 µ cr. laxe septatis; peritheciis hinc inde efformatis 35.50 u diam. raro usque 75 µ, primum brunnescentibus demum nigris superficie asperula donatis, contextu cellulis minutis polygonalibus praedito; conidiferis conidia e piriformi ovoidea brunneo-nigricantia. levia unilocularia (Asterostomellae ad instar) 25-28 × 15-19 ferentibus; ascigeris monascis, ascis octosporis; sporidiis bilocularibus obscure brunneis, levibus utrinque rotundatis 26.30 \* 11-13, loculis quandoque inaequalibus.

Hab. in foliis Strewiae ambiguae, Los Baños, Ins. Philipp. (RAIMUNDO).

THEISSENULA H. et P. Sydow, Ann. Mycol. XII, 1914, p. 198 (Etym. a mycologo praeclaro FR. THEISSEN de studio Ascomycetum imprimis merito). - Subiculum tenue haud hyphopodiatum, conidia pluricellularia colorata generans. Perithecia in subiculo superficialia, sessilia, ovato-globosa, olivaceo-fusca, astoma, initio parenchymatice cellulosa, dein histolysis ope subanhista. Asci aparaphysati, clavati, pauci, octospori. Sporidia anguste clavata hyalina, 1-septata, in maturitate 3-septata. - Gen. Schiffnerulae proximum.

1. Theissenula clavispora H. et P. Sydow, l. c. p. 198. - Subiculo hy- 4258 pophyllo, tenui, maculiformi subradiante plagulas griseo-atras 1-4 mm. latas efformante; hyphis haud hyphopodiatis, variis, aliis longis rectiusculis v. parum flexuosis crassiuscule tunicatis obscure fuligineis remote septatis (articulis 15-40  $\mu$  long.) 6-8  $\mu$  cr., aliis multo tenuioribus flexuosis copiosioribus tenuiter tunicatis 3-4  $\mu$ cr. dilute fuligineis remote septatis (articulis 25-50 µ long.) et vix

ramosis; conidiis clavulatis, oblongis v. fusoideis, plerumque 3-septatis, non constrictis,  $30.60 \times 9.12$ ; peritheciis laxe gregariis, in subiculo superficialibus, ovato-globosis, haud ostiolatis,  $40.65~\mu$  alt.  $40.50~\mu$  latis, olivaceo-brunneis, tunica ex cellulis subparenchymaticis v. irregularibus subinde etiam lobulatis imbricatim positis prominulis  $5.8~\mu$  latis composita; ascis paraphysatis ca  $5.8~\mu$  in quoque perithecio, clavatis, tenuissime tunicatis,  $22.25~\nu$  9-11; sporidiis octonis, in medio asci parallele v. fasciculatim positis, anguste clavatis, superne rotundatis et crassioribus, inferne sensim attenuatis, ad basim acutiusculis, primitus continuis, sed mox 1-septatis, in maturitate 3-septatis, non constrictis, hyalinis,  $15.16.5~\nu$  1,5-2.

Hab. in foliis subvivis Schizostach yi acutiflori (Graminaceae), Los Baños prov. Laguna, ins. Philippinenses (S. A. REYES).

HYALODERMA Speg. — Syll. IX p. 437, XI p. 270, XIV p. 465, XVI p. 406, XXII p. 27.

1. Hyaloderma Bakeriana P. Henn., Hedw. vol. 48. (1908), p. 103. — Hy- 4259 phis mycelli flavidulis, septatis, 3-4 μ crassis; peritheciis superficialibus, sparsis, minutis, oculo nudo haud conspicuis, flavidis, udis ovoideis, tenuissime membranaceis, pellucidis, 250 μ circ. diam., contextu subanhysto ex hyphis tenuibus radiantibus composito; ascis clavatis, rotundatis, octosporis, 90-160 × 10-14; sporidiis linearibus utrinque acutiusculis flexuosis, hyalinis, 3-7-septatis, 40-60 × 3-3,5.

Hab. in vaginis siccis Bactridis majoris (Palmae), socia Cyphella paraënsis P. Henn. in hyphis Helminthosporii, Hort. bot. Goeldi, Parà (C. J. BAKER).

2. Hyaloderma depressulum Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. 4260 Nac. Ciencias Cordoba, t. 23., 1919, Extr. p. 93. — Subiculum latiuscule effusum atrum submembranaceum tenuissimum, ex hyphis tortuosis dense congestis chlorinis 3 μ cr. efformatum; peritheciis sparsis v. laxe gregariis pusillis hemisphaericis, 75-125 μ diam., basi plana subiculoque late adnatis superne anhystis chlorinis per actatem subregulariter disruptis et pseudoostiolatis, inferne dense minuteque parenchymatico-sinuosis olivaceo-fuligineis; ascis obclavulatis apice abrupte subtruncato-rotundatis, basi obtuse cuneatis breviter crassiusculeque pedicellatis, 25 × 8, paraphysibus undulatis crassis simplicibus longioribus obvallatis, 8-sporis; sporidiis linearibus arcuatis utrinque attenuato-acutis minute 7-11-guttula-

tis, hyalinis,  $20 \approx 2.5$ .

Hab. parasitica in subiculo Meliolarum v. Asterinarum ad folia viva Abutilonis?, Apiahy America austr. (J. Puiggari). -H. inperspicuo Speg. valde affinis sed differt peritheciis infra applanatis, paraphysibus, ascis sporidiisque minoribus.

3. Hvaloderma Puiggarii Spegaz., Rel. Mycol. trop etc., in Bol. Ac. 4261 Nac. Cienc. Cordoba, t. 23., 1919, p. 94. - Subjection mucedineum parum evolutum et mox evanescens; peritheciis solitariis v. laxe 2-3 gregariis, globoso-depressis, perpusillis, 75-100 µ diam. glabris fusco-melleis in dimidio supero anhystis pallidioribus, in dimidio infero obsolete parenchymaticis infuscatisque; ascis subcylindraceis, antice obtuse rotundatis, deorsum cuneatis breviter graciliterque pedicellatis, aparaphysatis, octosporis, 65.70 × 8; sporidiis lineari-fusoideis, utrimque acutis, leniter arcuatis, 40-50 × 1,5-2, 9-13-septatis hyalinis.

Hab. parasitica ad stromata Polystomellae repandae Speg. in foliis Eugeniae?, prope Apiahy, Amer. austr. (J. PUIGGARI). - H. Glaziovi Pat. videtur affinis.

PHAEOSCHIFFNERULA Theiss., Broteria 12., 1914, fasc. I, p. 21, fig. 1; Verh. zool.-bot. Ges. Wien Bd. 66., 1916, p. 336. - Est Schiffnerula phaeospora. Conidia mycelii quadrilocularia.

1. Placoschiffnerula Compositarum Theiss., l. c., fig. 1. - Maculis my- 4262 celialibus parvis nigricantibus irregulariter subgregariis; hyphis flexuosis 7-9 \mu er. pallide brunneis articulatis levibus ramosis et reticulum densum efformantibus; hyphopodiis numerosis, pallide brunneis e globosis hemisphaericis, insidentibus, levibus, continuis, 10-12 µ cr.; peritheciis sparsis, globosis, mycelii concoloribus, ostiolo parum distincto praeditis, 120-150 µ diam., demum apice late apertis: contextu primum distincte parenchymatico e cellulis 8.12 µ cr. efformato dein indistincto, circa ostiolum cellulis elongatis radiantibus obscurioribus, ascis 4-7, aparaphysatis, e late ellipsoideis late clavátis, 55-70 × 25-35, crasse tunicatis, octosporis; sporidiis uniseptato-constrictis, levibus, obscure brunneis 23-27 \* 12-14, loculis plerumque parum inaequalibus. - Conidiis mycelicis quadrilocularibus, rectis v. curvulis utrinque rotundatis, levibus 32-54 ≥ 18-22, brunneo-fumosis, localis duo apicalibus quandoque pallidioribus.

Hab. in foliis Compositae cujusdam, in silvis prope S. Leopoldo, Rio Grande do Sul, Brasilia (F. THEISSEN).

- THRAUSTE Theissen, Verh. zool. bot. Ges. Wien, Bd. 66., 1916, p. 337. (Etym. a thraustos, ob perithecia evanida). Mycelium superficialiter septatum, ramosum hyphopodiatum non setosum; perithecia pedicellata parenchymatica, demum evanida mucosa ascum solitarium continentia.
- Thrauste Medinillae (Racib.) Theiss., l. c., p. 338 fig. 2. Ita vo- 4263 canda est Balladyna Medinillae Racib., Englerula Medinillae (Rac.) v. Höhn.
- 2. Thrauste affinis Syd., Ann. Mycol. 1917, p. 197. Epiphylla, pla-4264 gulas parum perspicuas 3-5 mm. diam. tenues orbiculares formans; mycelium ex hyphis longiusculis rectiusculis fuscis septatis ramosis 6-8 μ crassis compositum, hyphopodia numerosa alternantia, semiglobolosa 10-13 μ alta vel lata, sessilia, continua; perithecia copiosa, matura 30-50 μ alta vel lata, globulosa, immatura minora et praecipue angustiora, primitus membrana unistratosa brunneo-parenchymatica obsita, demum, membrana externa irregulariter disrumpente et secedente, stratum interius diaphanum hyalinum relinquentia, stipite brunneo persistente 15-25 μ longo 7-9 μ crasso suffulto; asci globosi vel subglobosi, 28-35 μ diam. aparaphysati; sporae conglobatae, oblongae vel ellipsoideo-oblongae, utrinque rotundatae, medio 1-septatae et constrictae, maturae obscure brunneae, 20-25 ≠ 10-13 μ.

Hab. in foliis Pygei spec. (Rosaceae), Bontoc, Luzon, Ins. Philipp. (H. S. YATES).

- SYNTEXIS Theiss., Verh. zool.-bot. Ges. Wien, Bd. 66., 1916, p. 340 (Etym. a syntexis, quia perithecia evanida). Mycelium nullum. Perithecia infra tantum parenchymatica, caeterum ex hyphis evanidis meridianis efformata. Asci numerosi aparaphysati in muco et hyphis paraphysoideis immersi, octośpori. Sporidia hyalina unilocularia fusoidea demum plurilocularia.
- 1. Syntexis Tibouchinae (P. Henn.) Theiss, l. e. p. 341, Physalospora 4265 Tibouchinae P. Henn., Fungi S. Paul. IV, Hedwigia v. 48., 1908, p. 9. Maculis rotundatis, brunneo-fuscis; peritheciis gregariis, epiphyllis, erumpenti-superficialibus, subglobosis vel ovoideis. fuscis, 150-200 μ diam.; ascis clavatis, vertice rotundatis, octosporis, 55-60 × 12-16, paraphysibus filiformibus hyalinis 2 μ crassis; sporidiis subdistichis, oblongis, clavatis vel subfusoideis, obtusis, hyalinis, continuis, 15-20 × 4 5.

Hab. in foliis Tibouchinae (Melastomataceae), Serra da

Cantareira, S. Paulo, Brasilia.

- RHIZOTEXIS Theiss. et Sydow, Ann. Mycol., 15., 1917, p. 140 et 469.—
  Perithecia ex hypostromate epidermico orta, globosa, astoma, membrana extus obscura minute parenchymatica, demum mucosa, intus ex hyphis meridianis constituta, pallida, matura etiam plus minus mucoso-evanescenti. Asci pauci, aparaphysati octospori. Sporidia brunnea bilocularia.
- 1. Rhizotexis Bauhiniarum (P. Henn.) Th. et Syd., l. c.— Ita vocanda 4266

  Parodiella Bauhiniarum P. Henn., Syll. XVII p. 541.
- OPHIOTEXIS Theiss., Verh. zool.-bot. Ges. Wien Bd. 66, 1916, p. 345.— Paraphyses et sporidia filiformia; caeterum ut in gen. *Nostocotheca* Starb., Syll. XVI p. 806.
- 1. Ophiotexis perpusilla (Speg.) Theiss., l. c. Ita vocandum est Hya- 4267 loderma perpusillum Speg. Syll. IX, 438 (= Pseudomeliola perpusilla (Speg.)- Rehm).
- PARENGLERULA v. Höhnel, Fragm. z. Mykol. X n. 525 in Sitzb. k. Ak. Wiss. Wien, math.-naturw. Kl., 119. Bd., Abth. I, 1910, p. (465) 73. Subiculum brunneum, superficiale, ex hyphis hyphopodiatis efformatum. Perithecia globosa, parietibus demum evanidis et in filamentis mucosis paraphysoideis ascos circumdantibus mutatis. Paraphyses nullae. Asci pauci, ovoidei, octospori. Sporidia brunnea, bilocularia.
- Parenglerula Mac Owaniana (Thüm.) v. Höhn. Ita vocanda Me- 4268
   liola Mac Owaniana Thüm. et Asterina Mac Owaniana Kalch. et
   Cooke, Syll. I p. 41.
- LINOTEXIS Syd., Ann. Mycol. 1917, p. 197. Mycelium copiose evolutum, superficiale, hyphopodiatum, setigerum. Perithecia ovato-globosa, pariete histolysis ope in hyphas dissoluto, mono-ascigera. Asci ovati, octospori; aparaphysati; sporae fuscae, bicellulares.
- 1. Linotexis philippinensis Syd., Ann. Mycol. l. c. p. 198. Epiphylla, 4269 plagulas primitus minutas, sed mox confluentes majores et effusas saepeque totam folii superficiem occupantes formans; mycelium copiose evolutum, ex hyphis rectis valde ramosis septatis obscure brunneis 6-8 μ crassis compositum; hyphopodia numerosa, alternantia, continua, subglobosa vel ovata aut breviter crasseque cylindracea, rotundata, semper integra, 10-12 μ longa, 8-10 μ lata;

setae mycelii copiosissimae, rigidae, basi saepe geniculatae, ad apicem acutae, atrae, opacae, 60-100  $\mu$  longae, inferne 6-7  $\mu$  crassae; perithecia dense aequaliterque disposita, ovato-globosa, 50-80  $\mu$  alta, 40-60  $\mu$  lata, extus primitus atra et muco, dein evanido, obtecta, pariete dein hystolisis ope in hyphas 58-80  $\mu$  longas 3-4  $\mu$  crassas flavo-brunneolas dissoluto, monascigera; asci ovati, 40-60  $\star$  35-50, octospori, aparaphysati; sporae ellipsoideo-oblongae, utrinque rotundatae, medio septatae et valde constrictae, loculis tandem secedentibus, in maturitate atrae, opacae, constrictae, 27-32  $\star$  12-13  $\mu$ 

Hab. in foliis indeterm. verisimiliter Sapindaceae cujusdam, prov. Rizal Ins. Luzon, Philipp. (M. RAMOS).

#### Subfam. 4. Perisporieæ

Dispositic sec. Theissen et Sydow, Ann. Myc. XV, 1917, p. 457 (Perisporiaceae Fl.).

#### A. Perithecia v. mycelium innata

1. PAMPOLYSPORIUM Magn
= Polysporidium Syd
2. ALINA Rac.
3. LASIOBOTRYS Kze
4. STOMATOGENE Theiss.
5. PILINE Theiss.
perficialia
6. IRENE Theiss. et Syd.
보다 기업으로 이 경기 있다. 이 전쟁을 받는다. 생물리 1일
7. CLEISTOSPHAERA Syd.

	r gronomy come, r erreportatem,	I OLI	sportess. 251
	b) Setulae in peritheciis et mycelio prae- sentes; speridia phaeophragmia (4-5 loc.)	8.	MELIOLA Fries  = Mynothecium Kze
H.	Mycelium exhyphopodiatum		
	1. Setulae praesentes		
	<ul> <li>a) Sporidia hyalodidyma; myeelium sim- plex filamentosum</li> </ul>	Q	DIMERIELLA Speg.
	b) Sporidia phaeodidyma; mycelium ut supra	10.	Phaeodimeriella Sp. 1908  Phaeodimeriella Th. 1912
	c) Sporidia phaeophragmia (4-5 loc.); mycel. ut supra d) Sporidia brunnea unilocularia; hyphis mycel. ramulis setuliformibus stellatis		MELIOLINA Syd.
	praeditis	12.	TERATONEMA Syd.
	a) Perithecia hyphis filiformibus tecta		
	α) Pili breves, sparsi; sporidia hyalo-		
	didyma	13.	RIZALIA Syd.
	β) Pili longi, densi; sporidia phaeophr-		
	agmia (4-loc.)	14.	HARARA Sace. et Syd.
	b) Perithecia glabra	•	
	a) Sporidia hyalodidyma		
	*. Perithecia rubra, membranacea;		
	asci globoso-ellipsoidei	15.	CHRYSOMYCES Theiss. et
	**. Perithe. nigra, e membran. co-		[Syd.
	riacea; asci cylindraceo-clavati .	16.	DIMERINA Theiss.
	β) Sporidia phaeodidyma		
	*. Perithecia rubra, firma; asci glo-		
	boso-ellipsoidei	17.	PARODIOPSIS Maubl.
	**. Perithecia nigra; asci cylindra- ceo-clavati	18	DIMERIUM Sacc. et Syd.
		•••	
	γ) Sporidia phaeophragmia (3-loc.) my- celium pilis erectis praeditum; perithe- cia membranacea	19.	PERISPORINA P. Houn.
	Genera dubia:		
	Sporidia hyalina continua: Meliolopsis Sacc. Sporidia hyalina continua trigona: Micromasti Sporidia hyalodidyma: Eudimeriolum Speg. Sporidia brunnea continua: Orbicula Cooke	a Si	leg.
	Genera removenda:		
He	Winteromyces Speg. (W. caespitosus (Wint.) onu.) Rick et Theiss.  Mycogala Rost. = Aspergillaceae  Dimerosporium Fuck.	Speg	g.) = Gibbera Mikaniae (P.
	요마하는 사람이 많이 많아 가는 때문에 가는 바다가 하는 사람들이 되었다. 그 때문에 되었다. 그 때문에		

Schenckiella P. Henn. = Agyrieae
Argynna Morg.
Parodiella Speg. = Pseudosphaeriaceae
Neorhemia v. Höhn. = Sphaeriaceae
Acanthostoma Th. = Sphaeriaceae
Soyphostroma Starb.
Maireella Syd. = Dothideaceae
Cleistotheca Zuck. = Pleospora
Perisporiella P. Henn. = Hypocrella
Pleomeliola Sacc.
Saccardomyces P. Henn. = Hypocreaceae v. Sphaeria

Saccardomyces P. Henn. = Hypocreaceae v. Sphaeriaceae
Ferrarisia Sacc. = Microthyriaceae (= f Seynesia Ipomocae Syd.)

Ophiomeliola Starb. = Pseudosphaeriaceae

### Sect. 1. Hyalosporae

- \*) APIOSPORIUM Kunze Syll. I p. 30, IX p. 375, XVI p. 408, XVII pag. 531.
- 1. Apiosporium atrum Massee, Bull. Bot. Gard. Kew, 1913, p. 104.— 4270 Mycelio plagulas atras suborbiculares, saepe confinenti-irregulares, velutinas, matrici arcte adnatas efformante; peritheciis centro plagularum densissime aggregatis, udis globosis, siccis cupulato-collapsis, 200-300 μ diam., basi setulis cinctis, contextu indistincto atro; ascis ovatis, deorsum in pedicello longissime productis, polysporis; sporidiis cylindraceis, hyalinis, continuis, 9-12 × 2-2,5. Adest quoque status pyenidicus.

Hab. in ramulis dejectis (« Para rubber trees » dicti), Kuala Lumpur, Malay States (C. K. BANCROFT). — Affine A. australi Speg.

- cleistosphaera Syd., Ann. Mycol. 1916, p. 74 (Etym. cleistos clausus et sphaera). Perithecia minuta, in mycelio superficiali ex hyphis fuscis hyphopodiatis composito nidulantia, globosa, astoma, atra membranaceo-coriacea, parenchymatice contexta, glabra. Asci ovati vel saccati, 8-spori, aparaphysati, sporidia, ellipsoidea, continua, hyalina. Cum gen. Meliolopsis Sacc. comparandum, Syll- I p. 25 et 68, IX p. 375, XXII p. 31.
- 1. Cleistosphaera macrostegia Syd., l. c. p. 75 fig. 1. Hypophylla, fo- 4271 liola omnino vel fere omnino obtegens; mycelio ex hyphis fusco-

<sup>\*)</sup> Sec. Theissen et Sydow, Ann. Mycol. 15., 1917, p. 483, gen. hoc reiciendum et ob spec. typ. Apiosp. Salicis Kze., ut fungum imperfectum habendum.

brunneis 6-8 µ crassis, rectis vel subrectis vix vel parum ramosis remote septatis (articulis 20-60 μ longis) tenue tunicatis; saepe composito; hyphopodiis paucis, continuis, sessilibus, valde variabilibus, saepe lobatis, usque 28 µ longis, peritheciis in mycelio dense sparsis usque gregariis, superficialibus, globosis, astomis, 120-160 µ diam., grosse parenchymatice fusce contextis, cellulis 15-20 µ haud raro etiam usque 25 µ diam.; ascis ovatis vel saccatis aparaphysatis, basi in stipitem brevem attenuatis, 65-80 × 25-30. octosporis; sporidiis di-tristichis, ellipsoideis, utrinque obtusis, intus nubilosis, hyalinis, 21-23 \* 10; pycnidiis simul praesentibus, ovato-globosis usque globosis, 60-105 µ diam., parenchymatice ex cellulis minutis, 4-5 µ diam. dilute fuscis contextis, poro erecto distincto 15-20 µ lato ex duabus seriebus cellularum obscure brunnearum crassius tunicatarum composito praeditis, circa porum setulis parcis continuis obtusis dilute brunneis apicem versus subhyalinis, 20-30 × 3,5-4,5 obsitis; sporulis ellipsoideis, continuis, flavidulis v. pallide flavo-brunneolis, minute 1-2-guttulatis, 5-6,5 × 2,5-3. Hab. in foliis Piptadeniae sp. (?) (Leguminosae), Seringal,

Hab. in foliis Piptadeniae sp. (?) (Leguminosae), Seringal, Auristella, Rio Acre, Peruviae (E. ULE).

EPIPHYMA Theissen, Verh. zool. bot. Ges. Wien, Bd. 66., 1916, p. 306, Ann. Mycol. 14., 1916, p. 404.—Est Parodiella hyalospora.—
Typ. gen. Epiph. laurinum (Cke) Th. (= Phyllachora laurina Cke., Ph. mexicana Sacc., Ann. Myc. 1913, p. 547); Epiph. anceps (v. H.) Th.

1. Epiphyma neurophilum Theissen, Ann. Mycol. 14., 1916, p. 404. — 4272 Hypophylla. Peritheciis opace nigris, subgloboso-turbinatis, subepidermicis, secus nervos seriatis, 350-400 μ cr., basi 140 μ latis; contextu stromatico 35 μ cr.; ascis cylindraceo-clavatis, supra parietibus crassis praeditis, parte sporifera 130-150 × 12, pedicello usque 80 μ longo, octosporis; sporidiis monostichis obtuse rotundatis, hyalinis, unilocularibus 18-20 × 8-10. — Perithecia setulosa. Hab. in foliis T i b o u c h i n a e sp. (Melastomataceae), prope Medellin Columbia (E. MAYOR)

2. Epiphyma Premnae Syd., Ann. Mycol., 15., 1917, p. 217. — Stromata 4273 perithecioidea, superficialia, hypostromate epidermali suffulta, epiphylla, plagulas orbiculares 1-1,5 cm. latas tandem saepe confluentes formantia, in hypophyllo contraposito maculas fuscidulas indeterminatas efficientia, arctissime congregata, globulosa, saepe leniter depressa et in sicco umbilicata, astoma, 200-250 μ diam., pa

renchymatice e cellulis atro-olivaceis vel atro-viridulis 6-8  $\mu$  diam. contexta, pariete crasso 30-50  $\mu$ , ad apicem saepe etiam crassiore; asci clavati, apice rotundati, breviter stipitati, 36-45  $\times$  10-12, octospori; sporae distichae oblongae, continuae, utrinque rotundatae, rectae, biguttulatae, 10-12  $\times$  3-4.

Hab. in foliis Premnae Cumingianae (Verbenaceae), Los Baños, Laguna. Ins. Philipp. (C. F. BAKER).

#### Sect. 2. Phaeosporae

CHAETOMIDIUM Zopf. - Syll. I p. 39, IX p. 378, XXII p. 32.

1. Chaetomidium barbatum Traaen, Norw. in Nyt. Mag. Natuwid. Chri-4274 stiania 1914, p. 37, t. IV f. 5-8. — Mycelio peritheciis dense aggregatis viridibus aut fuscis tecto; hyphis repentibus et adscendentibus ramosis, septatis, hyalinis, 0,5-5 μ diam.; peritheciis ovoideis v. ellipsoideis v. ovatis, 50 μ ad 1 mm. altis, contextu tenui fragili piloso praeditis; pilis simplicibus, septatis, rectis v. undulatis v. tortuosis 2-4 μ cr., brevibus v. usque ad 1 mm. long. viridifuscis; ascis clavatis, apice rotundatis 24-60 × 9,5-14, 8-sporis, mox diffluis; sporidiis late ellipsoideis, utrinque brevissime apiculatis, 8-11 × 7-8, fusco-violaceis, concavo-convexis, e latere 4-5 μ cr.

Hab. ad terram humosam pr. Christianiam in Norvegia. Ob peritheciis ostiolatis est Chaetomium, et Ch. globoso, pertinens (Cl. TRAAEN in litt.).

## ASCOTRICHA Berk. - Syll. I p. 37.

- Ascotricha pusilla (Ell. et Ev.) Chivers, Monogr. Chaetomium p. 220, 4275 tab. 17 fig. 13-21 (1915). Ita vocandum Chaetomium pusillum Ell. et Ev. seu Ch. Ellisianum Sacc. et Syd. Syll. XIV, 491.
- GUTTULARIA Obermeyer, Mycol. Centralbl. III (1913) p. 9 (Etym: guttula). Perithecia sphaeroidea, initio pallida dein brunnea, excipulo pluristratoso praedita, fasciculos hypharum in hospiti hymenium immittentia sed mycelio distincto carentia. Asci aparaphysati sphaeroidei vel ovati, octospori. Sporidia ellipsoidea, utrinque attenuata, majuscula, unilocularia, demum fusco-brunnea. Inter Orbiculam Cke. et Pseudomeliolam Speg. locandum; ad Melanosporam inter Hypocreaceas vergens.
- 1. Guttularia Geoporae Oberm., l. cit. Peritheciis usque ad 250 μ diam., 4276 diu clausis dein prope apicem irregulariter fissis, excipulo 25-35 μ

circ. crasso; ascis ovoideis, 80 40, tunica cito diffluente praeditis; sporidiis ellipsoideis, utrinque attenuatis, grosse guttulatis, 28-30 × 12-13, maturis fusco-brunneis.

Hab. parasitica in hymenic Geoporae graveolentis, Schwarzwald in Württemberg, Germania.

- FERRARISIA Sacc., Notae Mycol. XXIII (Acc. Ven. Trent. 1917) (Etym. a cl. mycologo italico Th. FERRARIS).—Perithecia globulosa, subiculo carentia, membranacea, nigricantia, ostiolo genuino nullo, sed demum late rimose hiantia, contextu grumoso indistincte celluloso. Asci ovoidei, aparaphysati, octospori. Sporidia oveidea minuta, continua, fuliginea. Notis datis a ceteris Perisporiaceis videtur distinctum genus.
- Ferrarisia philippina Sacc., l. c. Peritheciis epiphyllis, dense maculiformiter gregariis, irregulariter globosis perexiguis, 45-55 μ diam.,
  superficialibus, subiculo nullo insidentibus, vertice demum stellatim v. irregulariter rimosis, nigris; ascis in quoque perithecio paucis
  (3-6) ovato-ellipsoideis, sessilibus, 20 × 14-15, octosporis, aparaphysatis, sporidiis distichis, ovoideis, diu hyalinis dein fuligineis, 6 ×
  4,7; levibus, eguttalatis.

Hab. in foliis subvivis Merremiae sp. (Convolvulaceae), Los Baños, Ins. Philipp.—Subiculo deficiente et fabrica sporidiorum mox distinguitur. Theissen et Sydow, Ann. Mycol. 1917, p. 416 et p. 467, contendunt hoc genus cum Seynesia Ipomoeae, Microthryriacea sporidiis phaeodidymis triplo majoribus collidere! Cum exemplar meum non viderint, certe aliam rem sub oculis habuerunt, nec haec modus critice est laudandus (P. A. SACCARDO in ms.).

TERATONEMA Sydow, Ann. Mycol. 15., 1917, p. 180 — Mycelium effusum, compactum, tomentosum, atrum, subcrustaceum, ex hyphis corniculariiformibus ramosis (ramis repetito asteroideo-aculeatis) compositum; perithecia superficialia, globoso-conoidea, parenchymatice contexta, coriacea, saepe ad verticem setis paucis fasciculatis obsita, alibi levia, glabra, atra, astoma (ut videtur); asci minuti, clavulati, facillime diffluentes, octospori, aparaphysatis, sporae continuae, minutae, hyalinae, tandem ut videtur fuscae.

Huc pertinet, sec. Sydow, Asterula corniculariformis P. Henn. (Syll. XIV p. 692) = Orbicula Richenii Rich., Syll. XVII p. 533.

### Sect. 3. Hyalodidymae

- DIMEROSPORIUM Fuck. Syll. I p. 51, IX p. 401, XI p. 257, XIV p. 466, XVI p. 408, XVII p. 533, XXII p. 33. Sec. Theissen et Sydow, Ann. Myc. 15., 1917, p. 421, gen. hoc idem est ac Asterina Lév. et tunc ad Microthyriaceas adscribendum.
- 1. Dimerosporium agavectona Pat. et Har., Bull. Soc. Mycol. Fr. 1912, 4279 p. 282 (corr. agavectonum). - Maculis praecipue hypophyllis, orbi cularibus, sparsis confluentibusve, 5-30 mm. latis cinereo atris, ex hyphis subsuperficialibus, radiantibus, tenuissimis, 4-5 µ crassis, ramosis, transverse septatis, hyphopodiis destitutis, laxissime intricatis, prostratis, substrato arcte-adnatis stomatum per orificium exeuntibus, constitutis; peritheciis subastomis dense gregariis, concoloribus, sursum rotundatis, rugosiusculis, deorsum applanatis 70-90 u altis, centro in pedicellum aequilongum, cylindraceum, concolorem, stomatum cavitatem replentem abrupte attenuatis, contextu minute pseudoparenchymatico; ascis piriformibus, subsessilibus, apice rotundatis crassiusculeque tunicatis, 36-40 × 25, octosporis, aperaphysatis, jodi ope non coerulescentibus; sporis primitus hyalinis dein fusco-brunneis, elongatis, rectis, utrinque rotundatis una fine sensim attenuatis, transverse inaequaliter sentatis, paululum constrictis, laevibus, 26 \* 8.

Hab. in foliis vivis Agaves Salmianae (Amaryllidaceae), quae valde necat, in montibus mexicanis regionis Tolucanae (Sierra de Tlalpujahna) 2400 met. inter et 2700 (DIGUET).

2. Dimerosporium bignoniicola Speg., Mycet. Argent. VI, Anal. Mus. 4280 Nac. Buenos Aires XXIII p. 35 (1912). — Peritheciis sparsis vel pauci gregariis sessilibus vel brevissime crasseque subpedicellatis, ovato-subglobosis, 75-150 μ diam., atris, ostiolo prominulo saepe valide umbonato praeditis, glabris, udis turgidis, siccis collabescentibus, subiculo proprio destitutis, mycelio Meliolae insidentibus, contextu membranaceo, circa ostiolum compactiore et obscuriore; ascis cylindraceo-clavatis, breviter pedicellatis, 40-45 × 9-10, octosporis, paraphysibus filiformibus parum longioribus commixtis; sporidiis distichis, ellipsoideis, rectis vel leniter inaequilateris, 12 × 3, utrinque acutiuscule rotundatis, medio septatis, vix constrictis, hyalinis, non vel grosse guttulatis.

Hab. in foliis vivis Bignoniae (Bignoniaceae) cujusdam in silvis, prope Bompland, Misiones: Argentina.

3. Dimerosporium Cordiae P. Henn, Hedw. vol. 48 (1908) p. 4. — Pe- 4281 ritheciis epiphyllis, sparsis vel caespitosis, globulosis, atris, astomis, 60-90  $\mu$  diam., hyphis atrofuscis ca. 3  $\mu$  cr., apice palmatoramosis; ascis clavatis, apice rotundatis, tunicatis octosporis, paraphysatis, 35-53  $\times$  10-12, sporidis subdistichis, ovoideis, 1-septatis, constrictis, hyalinis,  $10-12 \times 4-4.5$ .

Hab. in foliis Cordiae sp. (Borraginaceae). S. Paulo, Capital, Brasilia. — A Dim. cordiicola P. Henn. et D. subpiloso Wint. distinctum.

Dimerosporium balsamicola (Peck.) Ell. et Ev., N. A. Pyr. p. 728, 4282
 Sacc., Ann. Myc. XIII n. 2 (1915) p. 113. — Meliola balsamicola
 Peck (1881), Zukalia balsamicola (Peck.) Sacc., Syll. IX p. 432, Asterella nuda Peck (1885), Cryptopus nudus (Peck) Theiss.

Hab. in folis Abietis balsameae (Coniferae), Tupper Lake (House).

Obs. Perithecia atro-nitidula 80-90  $\mu$  d.; hyphae septatae 5-7  $\mu$  cr., guttulatae luteo-fuligineae; asci 38-40  $\star$  9-12, octospori, paraphysibus diffluentibus cincti; sporidia disticha, oblonga, utrinque rotundata, 11-12  $\star$  4, hyalina, 1-septata, leviter constricta.

5. Dimerosporium Ingae P. Henn., Hedw. vol. 48 (1908) p. 4. — Caespitulis epiphyllis, gregariis, atris, pulvinato-rotundatis, 1 mm. ca. diam., hyphis atro-fuscis, ramosis, septatis, 3-8  $\mu$  crassis, radiantious, conidiis oblongo-cylindraceis vel clavatis, brunneis, medio 1-septatis, 40-60  $\times$  8-10; peritheciis caespitosis, globulosis, atro-fuscis, cellulosis, 150-200  $\mu$  diam., ascis clavatis, apice obtuso-rotundatis tunicatis, octosporis, 70-85  $\times$  23-30; sporidiis subtristichis vel conglobatis, oblongis, subfusoideis vel clavatis, medio 1-septatis, hyalinis, 40-52  $\times$  7-8.

Hab. in foliis Ingae sp. (Leonminosae), Serra da Cantareira, S. Paulo, Brasilia.

6. Dimerosporium Parkinsoniae Heald et Wolf, Mycologia, 1911, p. 5.— 4284 Myceliis effusis, ramosis, septatis, branneis; conidiis atro-brunneis, uniformiter 1-4-locularibus; peritheciis gregariis, atris, subglobosis; ascis octosporis, 45-50 × 12-15; sporidiis inaequaliter bilocularibus, guttulatis, hyalinis.

Hab. in foliis, ramulis, raro in ipso cortice levigato ramorum Parkinsoniae aculeatae (Leguminosae), frequens, Texas Amer. bor. — Plagulas effusas fuliginosas efformat.

7. Dimerosporium Strychni P. Henn., Hedw. vol. 48 (1908) p. 5. — Maculis mycelli amphigenis, effusis, fuscis, radiantibus; peritheciis

sparsis vel gregariis, globosis, astomis, atro-membranaceis, 90-100  $\mu$  diam.; ascis clavatis, obtusis, 8-sporis, paraphysatis, 26-35  $\times$  8-10; sporidiis subdistichis, ovoideis, medio 1-septatis, hyalinis, 5-6  $\times$  3.

Hab. in foliis Strychni (Loganiaceae), Capital, S. Paulo, Brasilia.

8. Dimerosporium lussoniense Sacc., Ann. Mycol. XII, 1914, p. 303 — 4286 Plagis epiphyllis adpressis, orbicularibus 1,5-2 mm. diam., interdum confluentibus et areas latas occupantibus, aterrimis, opacis ex hyphis radiantibus efformatis; hyphis filiformibus plerumque in fasciculos 15-20 μ cr. conglutinatis, leviter sinuosis non v. parce septatis, 3,5-4 μ crass.; peritheciis globulosis in centro plagae gregariis globoso depressis, nigris, 176-200 μ diam., centro leviter umbilicatis, subastomis; ascis crasse cylindraceis, apice rotundatis, brevissime crasse stipitatis, 45-50 × 10-12, octosporis, paraphysibus guttulatis, crassinsculis obvallatis, octosporis; sporidiis distichis, oblongis, utrinque rotundatis, 11-12 × 3,6-4, medio septatis non v. vix constrictis, loculo inferiore lenissime angustiore, e hyalino dilutissime chlerinis, initio (?) velo tenuissimo mucoso obductis.

Hab. in foliis Pittospori sp. (Pittosporaceae), Bontoc, Bauco, Luzon (Lussonia) Ins. Philippin. (M. v. OVERBERGH).

9. Dimerosporium albo-marginatum Sacc., Notae Mycol. XXIV p. 2 (Bull. 4287 R. Orto bot. Nap. 1918). — Coloniis epiphyllis, dense sparsis, superficialibus, subcircularibus, 2-3 mm. diam., nigris, subiculo eximie albido-marginato insertis, subiculo margine ex hyphis filiformibus intertextis, radiantibus dilute ochraceis 80-95 × 1,5-2,5 subcontinuis (hyphopodiis nullis) formato; peritheciis hypothallo brunneo, hyphopodiis (?) globosis 12  $\mu$  diam. praedito insertis, globulosis, confertis, astomis 85-95  $\mu$  diam. glabris, contextu parenchymatico fuligineo; ascis clavato-fusoideis, aparaphysatis, 45-50 × 8, breviter stipitatis, apice obtusulis, octosporis; sporidiis distichis s. oblique monostichis, fusiformibus utrinqué acutis, saepe curvatis, 16-17 × 2,4, hyalinis, medio 1-septatis non v. vix constrictis.

Hab. in foliis subvivis Sterculiae sp. (Sterculiaceae) in Horto bot. Singapore (Baker). — Eximia species peritheciis maculiformiter confertis nigris, halone thallino albido cinctis praedisticta. Ad quod genus neotericorum spectare possit haec species, A. nescit.

Dimerosporium pelladense P. Henn., Hedw. vol. 48 (1908) p. 4. — 4288
 Caespitulis epiphyllis, gregariis, atro-crustaceis, rotundatis, usque ad 1 mm. diam.; hyphis repentibus atro-fuseis, 3-3,5 μ crassis; pe-

ritheciis lenticularibus, astomis, atro carbonaceis, 70-90  $\mu$  diam.; ascis clavatis, apice rotundatis tunicatis, octosporis, paraphysatis, 30-40  $\times$  14-20; sporidiis subdistichis, ovoideis, hyalinis, medio septatis, 12-14  $\times$  5-6.

Hab. in foliis Rubiaceae, Morro Pellado, S. Paulo, Brasilia.

- DIMERINA Theiss., Beih. Bet. Centralbl. 29., 1912, Abt. II p. 46; Theissen et Sydow, Ann. Mycol. 15., 1917, p. 464. Est Dimerium hyalodidymum.
- 1. Dimerina Podocarpi H. et P. Syd., Ann. Mycol. XI, 1913, p. 57.— 4289 Peritheciis hypophyllis, in mycelio parco vix visibili ex hyphis fuscidulis v. flavo-fuscis brevibus parce ramosis remote septatis 3.4 μ cr. composito superficialiter insidentibus, in costa acuum centrali sparsis v. subgregariis, globosis, atris, astomis, glabris, 120·160 μ diam., contextu opaco indistincte parenchymatico; ascis ovato-globosis, ovatis usque saccatis, apice valde incrassatis, 40-55 × 22-30, octosporis, aparaphysatis; sporidiis di-tristichis, ellipsoideo-fusoideis, utrinque leniter sed obtuse attenuatis, medio 1-septatis non constrictis, hyalinis, 20·24 × 8-9.

Hab. in foliis Podocarpi macrophylli (Coniferae), Ka wanye-mura prov. Mino, Japonia (K. HABA).

2. Dimerina samarensis Syd., Ann. Mycol. XV, 1917, p. 198.— Epiphylla, 4290 plagulas minutas tenuissimas orbiculares formans, mycelium parce evolutum, ex hyphis flexuosis flavo-brunneis 2-2,5 μ crassis compositum; perithecia dense aequaliterque sparsa, exigua, globosoconoidea vel conoidea, 50-70 μ alta, 40-55 μ lata, glabra, levia, fere astoma, parenchymatice e cellulis 5-7 μ diam. flavo-brunneis contexta; asci aparaphysati, saccati, octospori, 25-35 × 12-16; sporae plerumque distichae, oblongae utrinque obtusae, medio septatae et leniter constrictae, hyalinae, 11-13 × 4.

Hab. in foliis Malloti sp. (Euphorbiaceae), Catubing River, Samar, Ins. Philipp. (M. RAMOS).

3. Dimerina Jacquiniae Ph. Garman, Mycologia v. VII, 1915, p. 337.— 4291 Maculis parvis,  $0.25~\mu$  liam., e peritheciis minutis, nigris, numerosis, circ. 10, efformatis; mycelio laxo, parum copioso, rubrido; peritheciis nigris,  $48.60~\mu$  diam.; ascis hyalinis, ovatis, 26.4~12; sporis angustis et hyalinis, 14.4.17~3.6.

Hab. in foliis Jacquiniae barbasco (Myrsinaceae), Mona Island Porto Rico.

4. Dimerina monensis F L. Stevens, Bot. Gazette 69., 1920, p. 254, 4292

tab. XIV fig. 20 .- Epiphylla raro hypophylla, effusa; mycelio superficiali, parco, observo, irregulari, hyphis 3 µ cr. ramulis tenuibus praedito, exhyphopodiato; peritheciis irregulariter sphaeroideis rugosis, 45-60 µ diam., astomis, in subiculo obscuro 10 v. ultra aggregatis v. confertis; greges usque 150-300 µ diam.; ascis numerosis, ellipsoideis obtusis, 34 × 17, octosporis; sporidiis inordinatis, hyalinis v. pallidissime fumosis, obtusis, bilocularibus, 13-16 \* 3.

Hab. in foliis Jacquiniae barbasco (Myrsinaceae), Mona Island, Porto Rico. - Verisimiliter eadem est ac precedenti.

5. Dimerina Graffii Syd., Enum. Philipp. Fungi I, in Philipp. Journ. 4298 of Sci. VIII (1913) p. 269. — In mycelio Meliolae parasitica; hyphis tenuibus, Meliolae mycelium ambientibus, olivaceo-fuscidulis, vel viridulo-fuscidulis, ramosis, remote septatis, anastomosantibus, 1,5-2,5 µ latis; peritheciis densiuscule dispositis, globosis, atris, astomis, glabris, levibus, 40-130 µ diam., contextu firmo parenchymatico e cellulis 7-9 μ longis composito; ascis clavatis, vel crasse cylindraceis, apice obtusis, sessilibus, filiformiter paraphysatis, 25-35 × 12-15, octosporis; sporidiis distichis, oblongis, utrinque rotundatis, medio 1-septatis, non vel vix constrictis, hyalino-viridulis, 10-12 \* 3-3,5, cellula superiore parum latiore.

Hab. in mycelio Meliolae sp. ad folia Gmelinae philippinensis (Verbenaceae), Luzon, Prov. Bataan, Limay (P. W. GRAFF).

EUDIMERIOLUM Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires, XXIII, p. 36 (1912). - Perithecia superficialia, astoma, subiculo praedita, glabra. Asci paraphysati octospori. Sporidia didyma, hyalina.

1. Eudimeriolum elegans Speg., loc. cit., cum ic. - Peritheciis hypo- 4294 phyllis, minutis, sparsis, inter pilos prominulis, subiculo parcissimo ex hyphis chlorinis, 5-6 \( \mu \) cr., parce ramulosis formato insidentibus, globosis vel globoso-depressis, 120-180 µ diam., irregulariter dehiscentibus, membranaceis; ascis cylindraceis, deorsum sensim leniterque attenuatis, vix pedicellatis, 60-70 > 8-10, paraphysibus filiformibus, tenuibus, parum longioribus copiose obvallatis; sporidiis ellipsoideo-elongatis, subfusoideis vel subclavulatis, medio septatis, non v. vix constrictis, hyalinis, per aetatem leniter chlorinis, 14-15 \* 4-5.

Hab. in foliis vivis Lueheae divaricatae (Tiliaceae), prope Puerto Léon, Misiones: Argentina.

DIMERIELLA Speg. - Syll. XXII, p. 37.

1. Dimeriella annulata P. et H. Syd., Ann. Mycol. X, 1912, p. 36.— Mycelio amphigeno, tenuissimo et parce evoluto, sed amoene in annulos concentricos evoluto et circulos  $^3/_4$ -1 cm. diam. efformante, ex hyphis tenuibus parce ramosis dilute brunneis hinc inde conidia sarciniformia transverse 3-septata longitudinaliter 1-septata dilute brunnea 12-17  $\mu$  longa 7-10  $\mu$  lata gerentibus composito; peritheciis superficialibus globosis, atris, astomis, sub microscopio fuligineis, 50-100  $\mu$  diam., setis parcis rigidis atro-brunneis 50-120  $\mu$  long. et 4  $\mu$  cr. septatis obsitis, ascis subglobosis v. ovatis, 25-30  $\star$  20-25, facile diffluentibus, octosporis; sporidis ellipsoideis, utrinque rotundatis, 1-septatis et constrictis, diu hyalinis, tandem brunneolis, 17-24  $\star$  8-12, loculis parum inaequalibus.

Hab. in foliis Gymnosporiae sp. (Celastraceae), Bandoliez Kop, Zoutpansberg, Transvaal (E. M. DOIBGE).

2 Dimeriella caraçaensis A. Maublanc, Bull. Soc. Myc. de Fr. XXXVI, 4296 1920, p. 34, tab. II, fig. 1-3. — Maculis epiphyllis, rotundatis, 3-8 mm. diam., saepe numerosis confluentibusque, atris fere lanuginosis. Hyphis repentibus, flavidis, plus minusve dense intricatis, flexuosis, saepe varicosis; peritheciis gregariis, nigro-opacis, globosis, 100-140 μ diam., poro pertusis, undique setis ornatis; setis numerosis, rigidis, obscure faligineis, apice pallidioribus obtusisque, septatis, 4-6 μ crassis, perithecii diametrum superantibus; ascis late cylindricis, breviter attenuato-pedicellatis, sursum rotundatis, aparaphysatis, 45-65 ≠ 12-15, 8-sp.; sporidiis distichis, subfusoideis v. oblongis, 1-septatis, leniter constrictis, cellula super. saepe paulo crassiori, hyalinis v. dilute fumosis, guttulatis, 14-18 ≈ 5-5,5.

Hab. in foliis vivis Baccharidis sp. (Compositae), Serra do Caraca, Brasilia (Herb. Mus. R. Jan.).

3. Dimeriella erigeronicola F. L. Stevens, Trans. Illin. Ac. of Sc., v. 4297 X, 1917, p. 166. — Superficialis, epiphylla, nigra, circulariter disposita 1-4 mm. diam.; mycelio copioso ex hyphis stramineis, sinuosis, 1,5 μ diam. septatis efformato; peritheciis nigris, numerosis, globosis, 64-102 μ diam. appendicibus numerosis (circ. 15), plerumque basilaribus mycelio conformibus obscurioribus 1,5-2 μ cr. sinuosulis septatis praedito; hostiolo minuto sed distincto; ascis cylindraceis, octosporis, obtusis, 31-34 × 7; sporis bilocularibus hyalinis v flavidulis, 7 × 1-5; paraphysibus numerosis, tenuibus, filiformibus, sinuosis.

Hab. in foliis Erigerontis spathulati (Compositae),

Quebradillas, Mannabo, Yauco, El Gigante, Maricao in Porto Rico, America bor.

4. Dimeriella clavisata Doidge, Trans. R. Soc. South Afr. V, 1917, 4298 p. 717 et 742, t. 57, fig. 3. — Epiphylla, maculas effusas efformans; mycelio ex hyphis flexuosis, septatis, fuscidulis, 3-5,5 μ crassis composito; peritheciis superficialibus, sparsis v. laxe gregariis, subhemisphaericis, atris, carbonaceis, 90-115 μ diam., praecipue basi v. in parte inferiore 9-15 setulis obsitis, setis septatis clavatis, 15-55 μ long., basi 3,5-7 μ crassis, ad apicem incrassatis, truncatis, diverse lobatis; ascis numerosis, paraphysatis, 8-sporis, sessilibus, cylindraceo-clavatis, apice rotundatis, 40-56 × 18-20; paraphysibus filiformibus, simplicibus, hyalinis; sporidiis conglobatis v. distichis, hyalinis, 1-septatis, subconstrictis 15-18 × 5-7.

Hab. in foliis Vernoniae angulifoliae (Compositae), Winckle Spruit, Natal (E. M. DOIDGE).

5. Dimeriella Olyrae F. L. Stevens, Trans. Illin. Ac. of Sc., v. X, 1917, 4299 p. 167. — Superficialis epiphylla; maculis nullis; mycelio ex hyphis flavidis obscure brunneis, copiosis septatis, sinuosis 3-4 μ circ. cr., maculose aggregatis efformato; peritheciis numerosis, 51-68 μ diam., nigris rugosulis, astomis, setulis 1-4, 234-300 long. nigris, septatis ornatis; ascis ovoideis octosporis, 51-65 × 24, non paraphysatis; sporidiis inordinate dispositis, 17 × 7, 1-septatis hyalinis.

Hab. in foliis Olyrae latifoliae (Graminaceae), Preston's Ranch, Maricao, Mayaguez, Porto Rico.

- LASIOSTEMMA Theiss. et Syd., Ann. Mycol. 15., 1917, p. 218. Mycelium superficiale, brunneum, septatum, ramosum exhyphopodiatum. Perithecia superficialia globosa apicem versus setulis fasciculatis raro sparsis praedita; apice obtuse papillata astoma; sporidia hyalodidyma. Typus generis: Las. melioloides (Berk. et Rav. in Dimeriella) Th. et Syd.
- 1. Lasiostemma Merrillii Syd., Ann. Mycol. 15., 1917, p. 218. Myce-4800 lium hypophyllum, parce evolutum, ex hyphis brevibus 3-3,5 μ crassis formatum, perithecia sparsa vel irregulariter aggregata, superficialia, globosa, 70-110 μ diam., parenchymatice e cellulis 5-7 μ diam. contexta, subopaca, obscure olivaceo-fusca, obtuse papillata, superiore parte praecipue a vertice setulis vel pilis longe radiantibus longis rectis vel subrectis subinde flexuosis flavo-brunneis 180-250 μ longis 3-4 μ crassis remote septatis (articulis 25-50 μ longis) obsita; asci quoad formam variabiles, mox breves et lati, mox angustiores

sed elongati,  $30.45 \times 16.22~\mu$ , aparaphysati, octospori, superne rotundati; sporae oblongae, utrinque rotundatae vel leniter attenuatae medio septatae, non constrictae, hyalinae,  $20.25 \times 4.6$ , plerumque distichae.

Hab. in foliis Radermacherae pinnatae (Bignoniaceae), Catubig River, Samar, Ins. Philipp. (M. RAMOS).

2. Lasiostemma cyathearum (Syd.) Th. et Syd., Ann. Myc. 15., 1917, 4301 p. 218, Dimeriella cyathearum Syd., Enum. Philipp. Fungi II, in Philipp. Journ. of Sci. VIII (1913) p. 478. — Subiculo hypophyllo, superficiali, atro, velutino, crasso, ex hyphis 5-6 μ crassis, obserris, remote septatis et vix vel parum ramosis composito; peritheciis superficialibus, globosis, astomis, 120-180 μ diam., ubique pilis subrectis vel flexuosis, obscure brunneis, remote septatis, 40-100 × 5-6 obsitis, contextu opaco e cellulis minutis 5-7 μ diam. parenchymatice composito; ascis clavatis, apice rotundatis, subsessilibus copiose paraphysatis, 60-70 × 14-16, octosporis; sporidiis distichis, oblongis, medio 1-septatis, non constrictis, hyalinis, 14-18 × 4-5, cellula superiore paullo latiore.

Hab. in foliis Cyatheae caudatae (Cyatheaceae), Luzon, Prov. Laguna, Mt. Maquiling, Philipp. (MERRILL).

ANTENNULARIELLA Woronichin, Les fumagines du Département de Sotshi, in Bull. of Applied Bot. VIII, n. 6, p. 771 (1915). — Absque diagnos.

1. Antennulariella fuliginosa Woronichin, l. c., tab. 136, fig. 945-961.— 4302 Mycelio brunneo, praecipue rectangulariter ramoso, crustas fuliginosas, usque 400-500 μ crassas, epiphyllas formante; cellulis hypharum cylindraceis, vel ad septa leviter constrictis (7)-12-16 × 6-8, guttulatis; pyenidiis globosis vel pyriformibus, contextu parenchymatico, diam. 30-45 μ, apice ostiolatis, in hyphis lateraliter vel terminaliter insidentibus; sporis hyalinis, ovalibus, 5 ≈ 1,5; peritheciis globosis, 60-75 μ diam., contextu parenchymatico appendiculis filiformibus, 4-5 μ crassis praeditis; ascis ovalibus, brevissime pedicellatis, 27-30 × 11-12, aparaphysatis (†); sporis oblongoovatis, hyalinis, 1-septatis, 10 × 3-4, cellula inferiore longiore.

Hab. in foliis vivis Ilicis aquifolii L., Caucasus distr Sotshi Gub. Tshernomorsk, socio Chaetothyrio colchico Woronichin.

### Sect. 4. Phaeodidymæ

ZOPFIA Rabenh. - Syll. I p. 54.

Zopfia Boudieri Arnaud, Bull. Soc. Mycol. Fr. 1913, p. 255, t. XI f. 4303
 A. et E.— Peritheciis sparsis, globosis, magnitudine variis, 0,5-1,25 mm. diam. rugulosis, nigris; ascis clavatis, ad basim vix attenuatis, apice rotundatis, magnitudine variis, plerumque 1-5 sporis; sporidiis magnis, plerumque medio septatis, constrictis, 40-52 × 25-32, vel rarius continuis (35-32 μ diam.) utrinque perfecte rotundatis, tuberculosis, atro-fuscis.

Hab. ad radices Ligustri vulgaris, Montpellier, Gallia meridionalis.

- WINTEROMYCES Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires, XXIII p. 37 (1912).— Etym. a cl. mycologo G. WINTER. Perithecia superficialia, astoma, setulosa, subiculo destituta. Asci octospori, paraphysati. Sporidia didyma, fusca. A Parodiella peritheciis setulosis ascisque paraphysatis recedit.
- 1. Winteromyces caespitosus (Wint.) Speg., loc. cit., cum icon., Paro- 4304 diella caespitosa Winter, Syll. IX p. 411. Peritheciis in caespitulos orbiculares parvos, 1.2 mm. diam., dense 4.10 constipatis, e globoso obovatis, 200-250 μ diam., omnino superficialibus, nigris, astomis, pilis flexnosulis, atris, 50-100 × 4-6, per aetatem deciduis adspersis, coriacellis; ascis late clavatis, breviter pedicellatis, 65-80 × 18.25, paraphysibus paucis, filiformibus, conspicue longioribus obvallatis; sporidiis subconglobatis, ovoideo-ellipsoideis, medio septatis et vix constrictis, diu hyalinis dein fumosis, postremo fuscidulis.

Hab. etiam in foliis vivis Mikaniae cordifoliae in silvis prope Bompland, Misiones: Argentina. — Sec. Theissen et Sydow, Ann. Mycol. 15., 1917, p. 133 et p. 466, Wint. caespitosus = Gibbera Mikaniae (P. H.) Rick et Theiss.

- \*) PARODIELLA Speg. Syll. I p. 717, IX p. 409, XI p. 260, XIV p. 469, XVI p. 412, 1124, XVII p. 541, XXII p. 41.
- Parodiella congregata P. et H. Syd., Ann. Mycol. X, 1912, p. 37.— 4305
   Peritheciis epiphyllis, globosis, minutissimis, 60-100 μ diam. dense

<sup>\*)</sup> De hoc gen. cnfr. Theissen et Sydow, Ann. Mycol. 14., 1916, p. 125.

confertis et greges minutos rotundatos 1-4 mm. latos Doassansiae ad instar efformantibus, basi lenissime immersis, astomis, minute parenchymatice contextis, atris, contextu sub microscopio primitus olivaceo-coeruleo tandem plus minus brunneo et subopaco; ascis quoad formam et magnitudinem ludentibus, mox ovatis v. subglobosis ca.  $30\text{-}40 \times 20\text{-}30$ , mox elongatis saccatis  $50\text{-}65 \times 15\text{-}20$ , sessilibus, apice incrassatis, paraphysibus indistinctis, octosporis; sporidiis di-tristichis, v. conglobatis, elongatis, 1-septatis, haud constrictis, olivaceis,  $26\text{-}30 \times 6\text{-}7,5$ , cellula superiore plerumque paullo breviore sed latiore.

Hab. in foliis vivis Limnanthemi Thunbergiani (Gentianaceae) Belfast Transvaal (E. M. Doldge).

2. Parodiella reticulata (Ell. et Ev.) Theiss. et Syd., Ann. Mycol. 1917, 4306 p. 130, Parod. grammodes reticulata Ell. et Ev. in schedis. — Peritheciis epiphyllis secus costam nervosque folii dense bifariam seriatis, e mutae pressione depressis, atro-nigricantibus, verruculosis, 200-250 μ diam.; ascis breviter stipitatis, clavatis, p. sp. 100-115 μ, octosporis; sporidiis distichis, griseo-brunneis, tenui-tunicatis, oblongis, leviter constrictis, utrinque non conico-tenuatis, 26 \* 8.

Hab. in foliis Chapmaniae floridanae (Leguminosae), Eustis Florida. Amer. bor. (NASH).

3. Parodiella perisporioides (B. et C.) Speg. — Syll. I p. 717 — var. mi- 4307 crospora Th. et Syd., Ann. Mycol. 1917, p. 129. — Epiphylla, aequaliter distributa, discreta; peritheciis 200-250 μ diam., minute papillatis, glabris, aetate collebascendo plano-scutellatis; ascis 80-90 μ long., p. sp., saepe tantum 6-sporis; sporidiis 25-27 × 8-9, rarius 30-32 μ long.; cetera typ.

Hab. in foliis I n d i g o f e r a e f l a c c i d a e (Leguminosae) in Amer. bor. — var. tasmanica Th. et Syd, l. c. — Peritheciis densis incrustantibus, sectione quam in typo paullo mollioribus et pallidioribus, brunneis, superficie asperulis,  $200.250 \mu$  diam.; ascis  $100.120 \mu$  p. sp.; sporidiis  $27.28 \times 9$ , saepe etiam  $32 \mu$  usque. —

Hab. in foliis Desmodii tasmanici (Leguminosae), Victoria Australiae (MUELLER)

4. Parodiella Griffitshii Th. et Syd., Ann. Mycol. 1917, p. 131. — Epi- 4308 phylla, folii superficiem incrustans; peritheciis asperulis, 130-160 μ diam.; ascis breviter stipitatis, p. sp. 110-130 μ, elongato-clavatis; sporidiis distichis, elongato-fusoideis, medio septatis, leviterque con strictis, tenui-tunicatis, laete griseo-brunneis, utrinque sensim leviterque tenuatis, valide biguttatis.

Hab. in foliis Psoraleae tenuiflorae (Leguminosae), Montana Billings in Amer. bor. (GRIFFITSH). - Peritheciis minutis et sporidiorum notis valde distincta species.

5. Parodiella Spegazzinii Th. et Syd., Ann. Mycol. 1917, p. 131. - Pe- 4809 ritheciis epiphyllis, folii superficiem incrustantibus, asperatis, 160-200 u diam., facile deciduis, fragilibus, saepe in folii cavitatem hemisphaericam relinquentibus; ascis clavatis, breviter stipitatis, p. sp. 100 \* 16-19, saepe elongatis 155 \* 13 usque; sporidiis distichis, v. (in ascis angustioribus) monostichis, 20-26 \* 10; coetera P. perisporioidis.

Hab in foliis vivis Rhynchosiae Sennae (Leguminosae), Bagnado S. Josè de Flores Argentina (Spegazzini, sub P. perisporioide). - var. Kilimandscharica Th. et Syd., l. c. - Foliis in epiphyllo omnino nigro-incrustatis, a basi ad apicem; peritheciis 150-200 μ diam.; sporidiis 28-29 \* 9. — In foliis Crotalariae sp. (Leguminosae), Kilimandscharo, Afr. orient.

HYPOPLEGMA Theiss. et Sydow, Ann. Mycol. 14., 1916, p. 135. - A 4310 Parodiella differt mycelio membranaceo, superficiale, ex hyphis liberis efformato, in stomatibus radicato, perithecia ferente; ab Apiosporina v. Höhn, sporidiis loculis aequalibus praeditis. — Typ. gen. Parodiopsis viridescens (Rehm, ut Parodiella) Maublanc, et tunc Hypoplegma virideacens (Rehm) Th. et Syd. vocandum.

# LASIOBOTRYS Kunze. - Syll. I p. 29, IX p. 374.

1. Lasiobotrys hispanica Theiss. et Syd., in Theissen, Ann. Mycol. 16., 4811 1918, p. 177. - A Lasiobotrys Lonicerae Kze et L. affinis Harkn. differt praecipue hypostromate hyalino nec nigro-brunneo. - Sclerotiis adpressis epiphyllis 220-250 µ latis, hypostromate innatis emergentibus, intus albis, cellulis 8 × 6, ambitu indistincto mucoso; peritheciis 60 × 50, brunnescentibus parum distinctis. Immaturus.

Hab. in foliis Lonicerae arboreae, Sierra Nevada, Hispania (PORTA et RIGO).

2. Lasiobotrys Butleri Theiss. et Syd. in Theissen, Ann. Mycol. 16., 4312 1918, p. 177. - Lasiobotrys Lonicerae Syd. et Butl., l. c., 1911, p. 384 p. p. - A Lasiobotrys Lonicerae Kze et L. affinis Harkn. differt praecipue hypostromate hyalino nec nigro-brunneo. — Sclerotiis arcte adpressis epiphyllis, superficiem minute granulosam efformantibus, 150-200 μ cr., intus albo-virentibus; cellulis exagonis,

13  $\mu$  latis; peritheciis parvis, 50.55 \* 40, parietibus indistinctis praeditis; immaturus.

Hab. in foliis Lonicerae sp., Bkowali, Naini-Tal, Indiae or. (E. J. BUTLER).

DIMERIUM Sacc. et Syd. - Syll. XVI, p. 410, XVII p. 537, XXII pag. 38.

1. Dimerium intermedium P. et H. Syd., Ann. Mycol. X, 1912, p. 37.— 4313 Peritheciis epiphyllis, in mycelio Meliolae quaedam parasiticis, hyphis parcissime evolutis, aggregatis, ovatis usque globosis, atris, superne angustatis papilliformiter productis et poro pertusis 90-150 μ diam.; ascis fasciculatis, numerosis, clavato-cylindraceis, 32-38 × 8-10, sessilibus, octosporis; sporidiis distichis, subfusiformibus-1-septatis, non v. vix constrictis, diu hyalinis, tandem flavo-brunneis, 7-10 × 3-3,5, loculo supero latiore; paraphysibus ascos paullo superantibus, filiformibus, numerosis; pycnidiis peritheciis similibus, sed minoribus; sporulis ellipsoideis, continuis, hyalinis, 2-guttulatis, 5,5-8 × 3-4.

Hab. parasiticum in Meliola quadam ad folia Isoglossae Woodii (Acanthaceae), Amanyimtote, Natal (E. M. Doidge).—. Dim. myriadeo (Cke.) Theiss. affinis sed differt ascis latioribus, coeterum etiam robustior.

2. Dimerium (Phaeostigme) Ramosii Syd., Ann. Mycol. 1917, p. 200.— 4314 Mycelium hyphas Asterinae dense amplectens, ex hyphis olivaceis vel olivaceo-brunneolis 2-3 μ latis flexuosis dense intricatis ramosis et anastomosantibus septatis compositum; perithecia superficialia, globosa 80-100 μ diam., ostiolo typico carentia, glabra, atroolivacea, opaca, parenchymatica e cellulis 5-6 μ diam. composita; asci fasciculati, paraphysati, sessiles vel subsessiles, ventricosi, 25-35 × 13-16, octospori; sporae 2-3-stichae, oblongae vel clavulatae, circa medium septatae, non vel leniter constrictae, intense olivaceo-brunneae, 12-16 × 3-3,5, loculo supero plerumque breviore sed paullo latiore.

Hab. in mycelio Asterinae sp. vetustae, ad folia Dasymaschalonis clusiflorae (Anonaceae), prov. Bataan, Luzon, Philipp. (M. RAMOS). — Gen. Phaeostigme Syd., l. c. p. 199, a Dimerio paraphysibus praesentibus tantum differt.

Dimerium Stevensi Ph. Garman, Mycologia v. VII, 1915, p. 337.— 4315
 Maculis forma irregularibus, 1 mm. v. ultra diam., peritheciis sphaeroideis, nigris, nitidis, 100 μ diam.; ascis clavatis, 42-50 × 20-22;

sporidiis leniter chlorinis, quandoque obscurioribus, bilocularibus. 16-20 . 6-8: paraphysibus copiosis.

Hab. in foliis Cordiae cory mbosae (Borraginaceae), Quebradillos. « College Grounds », Mayaguez, Maricao, Porto Rico, Amer. Centr.

4. Dimerium scabrosum Syd. in Leaflets of Philipp. Bot. V (1912) 4316 p. 1534. - Hypophyllum, plagulas orbiculares 3-8 mm. latas, atras efformans, in mycelio Asterinae parasitans; mycelio densissime intertexto, ramosissimo, ex hyphis 3-5 µ crassis, fuscis composito: peritheciis in mycelio superficialibus, globosis, astomis, atris, rugulosis, in sieco collapsis, 130-160 µ diam.; ascis saccatis usque fusoideo-clavatis, apice leniter incrassatis, sessilibus, 38-45 \* 14-16, octosporis; paraphysibus numerosissimis, filiformibus, ascos superantibus: sporidiis 2-3-stichis, cylindraceis, utrinque obtusis, medio 1-septatis, suepe leniter constrictis, ex hyalino fusco-brunneis, dense distincteque verrucosis, 15-22 \* 3,5-4,5, loculis minute guttulatis.

Hab. parasiticum in mycelio Asterinae ad folia Canarii polyneuri (Burseraceae), Brooks Point, Palawan, ins. Philipp .-Ob sporidia cylindracea et distincte verrucosa statim dignoscenda.

5. Dimerium pseudoperisporioides Rehm, Ascomyc. Philipp. II, in Phi- 4817 lipp. Journ. of Sci. VIII (1913) p. 254. - Peritheciis in medio macularum epiphyllarum, orbicularium, nigritularum, 0,5-1 cm. diam. densissimis, versus marginem sparsis, sessilibus, globulosis, nigris, glabris, ad basim hyphas nonnullas brevissimas fuscidulas 3-5 µ cr. gerentibus, haud ostiolatis, 100 µ diam.; ascis 5 vel 6, globosoovoideis, usque ad 35 µ latis, octosporis, paraphysibus gelatinosis intermixtis; sporidiis oblongis vel subclavatis, utrinque obtusis, medio septatis et constrictis, subfuscis, 10-12 \* 5-6.

Hab. in foliis I pomoe a e (Convolvulaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. J. BAKER). - Species reicienda secundum Sydow, Ann. Myc. 1917, p. 239.

6. Dimerium Cayaponiae Ph. Garman, Mycologia v. VII, 1915, p. 335, 4318 tab. CLXXI fig. 5. - Maculis nigris, fuligineis, epiphyllis, forma irregularibus, usque 3 mm. et ultra diam.; peritheciis nigris, globosis, 0,12 mm. diam.; ascis lineari-clavatis, octosporis, 33,6-36 \*2,4; sporidiis bilocularibus, obscuris, fumosis, loculo altero an gustiori, 7,3-9,6 \* 3,6-5.

Hab. in foliis Cayaponiae americanae (Cucurbitaceae), Utuado Porto Rico, America Centr. - Sec. Ph. Garman, hoc genere spectant etiam Dothidea grammodes Berk, et Sphaeria me-

lioloides Berk. et Curt.

7. Dimerium Tayabense H. S. Yates, The Philipp. Journ. of Sc. Bot. 4319 13., 1918, p. 362. — Mycelio ex hyphis tenuibus ramosis subhyalinis ca. 2  $\mu$  cr. composito; peritheciis globosis vel ovoideis, 45-55  $\mu$  diam., astomis, membranaceis, obscure brunneis, pseudoparenchy maticis; setis paucis (6-12), brunneis, septatis, ca. 20  $\mu$  longis; ascis numerosis, subclavatis, octosporis,  $40 \times 12$ ; sporidiis distichis, brunneis, ovoideo-oblongis, 1-septatis, constrictis, loculo superiore latiore,  $10\text{-}12 \times 2$ .

Hab. parasiticum in mycelio Asterinae et Meliolae in foliis Momordicae (Cucurbitaceae), Mount Binuang Tayabas Prov., Luzon Ins. Philipp. (Ramos et Edaño).

8. ? Dimerium japonicum H. et P. Syd. et Hara in H. et P. Syd., Ann. 4320 Mycol. X, 1912, p. 406.— Mycelio in Meliola parasitico, hyphas Meliolae densissime ambiente et rete densissimum efformante, ex hyphis fuscidulis saepissime anastomosantibus 3-4 μ cr. vix septatis composito; peritheciis globosis gregariis, atris, ostiolo pertusis, glabris, 80-130 μ diam., contextu peculiari, aegre perspiciendo ex cellulis minutissimis composito; ascis clavatis v. cylindraceo-clavatis, obtusis paraphysatis, 35-40 × 10-12, octosporis; sporidiis distichis, oblongis v. subfusoideis aut cylindraceis, utrinque plerumque lenissime attenuatis, sed apicibus obtusis, medio 1-septatis et leniter constrictis, fusco-brunneis, 14-17 × 4-5; pycnidiis eadem forma et magnitudine ac peritheciis; pycnidiosporis ellipsoideo-oblongis, dilute fuscis, continuis, biguttulatis, 7-9 × 3-4, utrinque obtusis.

Hab. parasiticum in Meliola quadam ex affinitate M. amphitrichae ad folia Arundinariae Narihizae var. Yashadake (Graminaceae), Tokyo, Japonia (K. ONUMA).

9. Dimerium Mori (Y. Endô) Sacc., Dimerosporium Mori Y. Endô, Journ. 4321 Seric. Ass. Jap. 1917, p. 300 fig. B (p. 288). — Peritheciis majusculis, ellipsoideis, 110-120 μ altis, 130-140 μ latis, exappendiculatis, atro-brunneis; contextu laxe celluloso, cellulis pluri-guttulatis; ascis numerosis, clavatis, tenui-tunicatis, 60-70 × 12-15, octosporis; sporidiis distichis, oblongis, utrinque acutulis, 7-8 × 5-7; flavo-brunneis, 1-septatis, loculis guttulas 1-2 refringentes includentibus.

Hab. in foliis Mori albae, socia Meliolae specie, Ueda, Tokida Japoniae.

10. Dimerium singaporense Sacc., Notae Mycol. XXIV p. 3 (Bull. R. 4322 Orto bot. Napoli 1918). — Coloniis epiphyllis, sparsis v. subgre-

gariis, subcircularibus, 2-3 mm. latis, opace nigricantibus, adpressis ex hyphis subradiantibus, parce ramosis, subcontinuis, 3-4  $\mu$  cr., guttulatis, brunneis, hine inde inflatulis formatis; conidiis saepius pleurogenis, clavatis, 3-septatis non constrictis brunneis, 25-30  $\approx$  4,5-5, longiuscule pedicellatis; peritheciis in centro coloniae paucis, globoso-depressis, 150-200  $\mu$  diam., nigris, astomis, nudis; contextu dense celluloso, parum distincto, solidiusculo, fuligineo; ascis fusoideis, breviter tenuato-stipitatis, apice obtusulis, aparaphysatis (1), 35-40  $\approx$  14, octosporis; sporidiis subtristichis, fusoideis, utrinque imprimis apice obtusulis, medio 1-septatis, leviter constrictis, 18-20  $\approx$  4,5, dilute fuligineis, saepe inaequilateris.

Hab. in foliis emortuis R h o d o m y r t i t o m e n t o s a e (Myrtaceae), Reservoir Woods, Singapore (BAKER). — Affine D. paulensi (P. Henn.) Sacc. aliisque sed distingui potest.

11. Dimerium Solani P. Henn., Hedw., vol. 48 (1908) p. 5. — Caespi-4323 tulis epiphyllis, rotundatis, sparsis vel gregarie confluentibus, atris; peritheciis gregariis in hyphis Meliolae parasiticis, globulosis, atris, cellulosis, 60-100  $\mu$  diam.; ascis clavatis, obtusis, paraphysatis, octosporis, 40-50  $\times$  7-10; sporidiis oblique monostichis vel distichis, ovoideis vel ellipsoideis, medio 1-septatis, haud constrictis, fuscobrunneis, 8-11  $\times$  3-4.

Hab. in foliis Solani grandiflori (Solanaceae) ad Meliolam parasiticum, Morro Pellado, S. Paulo, Brasilia.

12. Dimerium (Phaeostigme) Clemensiae Syd., Ann. Mycol. 15., 1917, 4324 p. 200. — In Asterina quadam parasitica; mycelium ex hyphis tenuibus subhyalinis flavidulis vel viridulis 2-3 latis copiosis compositum; perithecia gregaria, globoso-conoidea, 80-140 μ diam., ostiolo typico carentia, parenchymatice e cellulis flavo-brunneis 4,5-7 μ diam. contexta; asci sessiles, clavato-cylindracei, 38-48 × 12-15, octospori, paraphysati; sporae distichae, oblongae, medio septatae, vix vel leniter constrictae, utrinque rotundatae, in maturitate intense fuscae, 12-15 × 4,5-6,5, leves.

Hab. parasitica in Asterina quadam valde vexata, ad folia Solani torvi (Solanaceae), Pauai, Benguet, Ins. Philipp. (MARY STRONG CLEMENS).

13. Dimerlum Wattii Syd. et Butl., Ann. Mycol. IX, 1911, p. 383, tab. 4325 XVII fig. 4-11. — Peritheciis plerumque epiphyllis, in crustis Asterinae Camelliae insidentibus et probabiliter in eis parasitice vigentibus, minutis, globosis v. ellipticis, collo leniter prominulo apertis, globosis 50-60 μ diam. v. elliptico et ca. 80 × 45;

ascis cylindraceo-clavatis,  $33 \times 10$ , octosporis, aparaphysatis; sporidiis oblique distichis, 1-septatis et leniter constrictis, brunneis,  $7 \times 3.5$ , cellula superiore latiore; pycnidiis simul praesentibus eadem magnitudine ac peritheciis, difformibus, aliis lageniformibus collo distincto praeditis, aliis globosis et pilis rigidis atris opacis continuis acutis circa porum obsitis; pycnidiosporis continuis, oblongis v. ellipsoideis, hyalinis,  $4.5-6.5 \times 2.5-3.5$ ; conidiis numerosis, falcatis, 3-septatis,  $70-90 \times 25$ , cellulis extimis hyalinis, duabus interioribus brunneis († Dimerium).

Hab. parasiticum (ut videtur) in crustis Asterinae Camelliae ad folia Camelliae Theae (Theaceae), Dunmur Dullung, Sibsagar Distr. Assam, Indiae orient. (G. WATT), Darjeeling (Mc RAE).

14. Dimerium Celtidis P. Henn., Hedw. vol. 48 (1908) p. 5. — Caespi 4322 tulis hypophyllis, gregariis, rotundato pulvinatis, atris, crustaceis, 1-3 diam.; peritheciis gregariis, subgloboso-collapsis, cellulosis, atrofuscis, pertusis, 90-120 μ diam.; ascis cylindraceo-clavatis, obtusis, octosporis, 40-60 € 4-5,5; sporidiis oblique monostichis vel subdistichis, ovoideis vel ellipsoideis, medio 1-septatis, fuscidulis, 5-7 ≈ 3.

Hab. in foliis Celtidis glycycarpae (Ulmaceae), Serra da Cantareira, S. Paulo, Brasilia.

15. Dimerium rizalense Syd., Ann. Mycol. 15., 1917, p. 198. — Mycelium 432 parce evolutum, ex hyphis tenuibus 2-2,5 μ latis olivaceo-fuscidulis compositum; perithecia gregaria, superficialia, globosa, fere astoma, 75-90 μ diam., glabra, parenchymatice e cellulis 6-9 μ diam. obscure olivaceo-brunneis contexta; asci aparaphysati, sessiles, cylindracei vel cylindraceo-saccati, 26-36 × 9-11, octospori; sporae distichae, oblongae vel obclavatulae, intense olivaceo-brunneae, medio septatae, leniter constrictae, leves, 11 13,5 × 3-4, cellulis serie aequalibns, serie superiore leniter latiore sed breviore.

Hab. parasiticum in mycelio Asterinae pusillae, ad folia Premnae sp. (Verbenaceae), prov. Rizal, Luzon, Philipp. (M. RAMOS).

PHAEODIMERIELLA Spegaz. — Syll. XXII p. 37. — Phaeodimeriella Theiss., Beih. Bot. Centralbl. 29., Abt. II, 1912, p. 46.

1. Phaeodimeriella (Chaetostigmella) papillifera Syd., Ann. Mycol., 15., 432 1917, p. 201. — In Meliola quadam parasitica; mycelium ex hyphis tenuibus flavidis vel flavo-viridulis copiose anastomosantibus 2-3 µ latis compositum; perithecia laxe gregaria applanato-globulosa,

100-140 µ díam., ostiolo typico carentia, ad verticem verrucis vel napillulis minutis aut elongatis et tunc usque 20 µ longis circinatim dispositis irregularibus saepe obscurioribus praedita, brunneola, parenchymatice e cellulis 6-8 µ diam., contexta; asci cylindracei; breviter pedicellati, 42-50 \* 10-12, subinde elongati usque 70 μ longi, octospori; paraphyses copiosae, ascos superantes, 1 μ crassae; sporae distichae, in ascis elongatis monostichae, oblongae, 1-septatae, non constrictae, 12-14 × 3, din hyalinae, tandem flavoviridulae.

Hab. in mycelio Meliolae cujusdam ad folia Ixorae Cumingii (Rubiaceae), prov. Bataan Luzon. Ins. Philipp. - Gen. Chaetostigmella Syd., l. c., p. 199 a Phaeodimeriella paraphysibus praesentibus tantum differt.

2. Phaeodimeriella curviseta Sydow, Ann. Mycol., 17., 1919, p 35.— 4329 Perithecia sparsa, superficialia, mycelio fere nullo vel saltem aegre perspiciendo, globulosa, 80-130 µ diam., parenchymatice e cellulis fuscis 8-10 µ diam. composita, parte superiore circa ostiolum atypicum indistinctum setis pluribus rigidis plus minus introrsum curvatis continuis apicem versus attenuatis atro-brunneis 20-35 µ longis 3.5 µ latis obsita; asci tenniter tunicati, fasciculati, plerumque cylindracei subinde inferne leniter ventricosi, sessiles, 38-45 × 8-10. aparaphysati 8-spori; sporae distichae, elongato-ellipsoideae vel saepius oblongae, utrinque obtusae, obscure olivaceo-brunneae, medio septatae et leniter constrictae, leves 10.14 \* 3,5 4,5; pyenidia peritheciis similia, aeque setulosa, sed plerumque paullo minora; conidia oblonga, continua, subhyalina, utrinque minute 1-guttulata,  $7-10 \approx 2-3$ .

Hab. parasitica in Diedickea singulari Syd. ad folia Polyosmae cyaneae Ehn. (Saxifragaceae), Cabadbaran, M. Urdaneta, prov. Agusan, ins. Mindanao, Philippin. (A. D. E. ELMER).

3. Phaeodimeriella capensis Doidge, Trans. R. Soc. South Afr. V. 1917, 4330 p. 719 et 742, t. 58 fig. 8. - Hypophylla v. amphigena, maculas effusas radiantia, atras, 3-5 mm. diam., efficiens; hyphis radiantibus, 6-7 µ crassis hyphopodiis continuis, alternis vel sub-oppositis; ramis oppositis; peritheciis numerosis, atris globulosis, carbonaceis, verruculosis, 146-160 µ diam., setulosis; setis 15-20, attenuatis; ascis numerosis, paraphysatis, ellipticis, octosporis, apice incrassatis, sessilibus, 55-70 × 12-14; sporidiis sub-distichis, fuscis. 1 septatis, ellipsoideis, ad septum leniter constrictis, 16-18 × 4-5 pvcnidiis peritheciis similibus; conidiis ellipsoidis, continuis, circ. 14 > 3.

Hab. in foliis Apodytis dimitiae, Knysna, C. B. S. (P. J. PIENAAR).

- WAGERIA F. L. Stevens et N. E. Dalbey, Mycologia, 11., 1919, p. 7 (a Cl. Dr. HAROLD WAGER, anglico). Mycelium brunneum superficiale hyphopodiatum, perithecium sphaeroideum astomum, typice perisporiaceum; asci octospori, sporidia brunnea bilocularia; perithecium appendicibus vermiformibus praeditum. A gen. Dimerium appendicibus vermiformibus praesentibus a Phaeodimeriella et Acanthostigma setulis nullis diversum.
- 1 Wageria portoricensis F. L. Stevens et N. E. Dalbey, l. c., fig. 11-12.— 4331 Mycelio pallide brunneo superficiale irregulariter ramoso 4  $\mu$  cr.; hyphopodiis irregulariter dispositis numerosis, primum subsphaeroideis dein irregularibus 7-10  $\mu$  diam.; peritheciis sphaeroideis, parvis 47 55  $\mu$  diam., ascis paucis sensim maturantibus; appendicibus vermiformibus 1-3, plerumque 1, contortis, 40-80  $\approx$  7; ascis inordinatis magnitudine variabilibus, 8-sporis; sporidiis bilocularibus, obtusis, brunneis, 21  $\approx$  6-7.

Hab. in Gonzalagunia spicata, Jajome Alto, el Alto de la Banderas, Porto Rio, Amer. bor.

## GENERA ULTERIUS INQUIRENDA:

PHAEOCRYPTOPUS Naoumoff, Champ. Oural I, in Trav. Bur. mycol. (1915) p. 20 (Etym. phaios obscurus et Cryptopus cui affinis). — Mycelium superficialiter effusum, laxum, brunneum, tenue — Perithecia globosa, v. globoso-depressa, irregulariter ostiolata, basi stipitiformi in matricem immersa praedita; contextu parenchymatico, e tenaci submolli. Asci cylindracei paraphysati, octospori. Sporidia 1-septata, fuliginea. — A Dimerio videtur differre, imprimis peritheciis basi stipitiformi immersa praeditis, et a Cryptopode sporidiis coloratis.

1. Phaeocryptopus Abietis Naoumoff, l. c., p. 20 t. I f. 1, a. b. (sed ubi 4332 in tabula?). — Mycelii hyphis 3 μ cr. brunneis; peritheciis e globoso applanatis 85 μ diam., v. 110 μ lat. et 95·100 μ alt., secum nervum longitrorsum dense seriatis; contextu 14·22 μ cr. e cellulis angulosis, brunneis 10·13 μ diam. efformato; ascis cylindraceis 55·60 × 9,6·12, pedicellatis, irregulariter mono-v. subdistichis, paraphysatis; paraphysibus filiformibus, simplicibus, hyalinis 70 × 2,7; sporidiis 14·16 × 5,5, prope medium septatis, constrictis, fuligineis, primo oblique dein recte distichis, loculis vix aequalibus.

Hab. in foliis adhue vivis v. languidis Abietis sibiricae, Perm, Ural, Rossia.

- DIMERIOPSIS F. L. Stevens, Trans. Illin. Ac. of Sc. v. X, 1917, p. 171 (Etym. a *Dimerium* cui affinis). Perithecia infra crusta myceliali efformata.
- 1. Dimeriopsis arthrostylidicola F. L. Stevens, l. c., fig. 2. Mycelium 4333 superficiale nigrum, caules hinc inde incrustante. Mycelio ex hyphis 4-5  $\mu$  cr. sinuosis, brunneis dense intertextis margine radiantibus efformato; hyphopodiis nullis; setis crasse tunicatis, numerosis,  $312 \times 10$ ; peritheciis 400-450  $\mu$  diam. astomis sub mycelio nidulantibus; ascis numerosis clavatis, crasse tunicatis, tunica apice tenuiori, octosporis  $100\text{-}150 \times 25\text{-}30$ ; paraphysibus filiformibus collabescentibus; sporidiis e rectis leniter falcatis, inordinatis, bilocularibus, raro quadrilocularibus, obscure brunneis, ad septa constrictis obtusis,  $40\text{-}55 \times 12\text{-}14$ .

Hab. in caulibus Arthrostylidii sarmentosi, Monte Alegrillo, Porto Rico.

## Sect. 5. Phaeophragmiæ

- HARAEA Sacc. et Syd., Ann. Mycol. XI, 1913, p. 312 (Etym. a el. K. Hara fungi detectore).— Perithecia superficialia, globulosa, sessilia, membranaceo-subcarbonacea, astoma, epapillata, nigra, setulis parcis, praelongis, rectiusculis, septatis, nigricantibus conspersa; contextu grosse celluloso. Asci tereti oblongi, octospori, paraphysibus inaequalibus mucosis obvallati. Sporidia oblongo-fusoidea, 3-septata, grosse 4-guttata, dein fuliginea. Videtur quasi Chaetomidium phaeophragmium.
- 1. Haraea japonica Sacc. et Syd., l. c., p. 312. Peritheciis gregariis 4334 globosis, atro-nitidulis, 140  $\mu$  diam., setulis 900-1000  $\approx$  9-10, filiformibus, basi subincrassatis, septatis, fuligineis, summo apice non acutis; contextus cellulis globoso-polyhedricis, fuligineis; ascis tereti-oblongis, apice rotundatis,  $100-120 \approx 30$ , mucoso-paraphysatis, octosporis, breviter crasseque stipitatis; sporidiis distichis, oblongofusoideis, 3-septatis, diu hyalinis, grosse 4-guttatis,  $35-40 \approx 11-12$ , demum fuligineis, ad septum medium non v. vix constrictis.

Hab. in culmis tenuioribus Sasae paniculatae (Graminaceae, Kawauye-mura in Japonia (K. HARA). — Mycelium repens, breve, subinde fasciculatum, nullo modo melioloideum.

4335

PERISPORIOPSIS F. L. Stevens, Trans. Illin. Ac. of Sc. v. X, 1917, p. 170 (Etym. a *Perisporium* cui affinis). — Sporidia primum violacea demum brunnescentia, saepe muriformia; asci primum in parenchymate sparsi demum in cavitate peritheciorum aggregati. Si gen. hoc validum habendum est, nomem novum Stevensea Trotter proponendum, quia jam extat gen. *Perisporiopsis* P. Henn. 1904 (Pseudosphaerieae).

Perisporiopsis Wrightii (B. et C.) F. L. Stevens, l. c.
 Huc ducendum est Perisporium Wrightii B. et C., Syll. I p. 57.—
 Cnfr. de hac specie A. Wolf, Ann. Mycol. X, 1912, p. 113, cum icon et tab., quae morbum « black spot » dictum gignit.

PERISPORIUM Fr. — Syll. I p. 55, IX p. 412, XI p. 260, XVII p. 544, XXII p. 44. — Sec. Theissen et Sydow, Ann. Myc. 15., 1917, p. 448, gen. hoc minime servandum quia species typicae initio conditae, v. steriles v. ad greges diversos Fungorum pertinent.

1. Perisporium Bromeliae F. L. Stevens, Trans. Illin. Ac. of Sc. v. X, 4336 1917, p. 168. — Maculis hypophyllis fumosis, 1-2 cm. diam.; mycelio superficiali, copioso, brunneo-nigro, ex hyphis septatis sparse ramosis efformato; peritheciis irregularibus; globosis, 110-120  $\mu$ , astomis; ascis ovatis e basi perithecii fasciculatis, numerosis, tetrasporis, aparaphysatis, 50-58  $\times$  20; sporidiis fusoideis, stramineis, irregularibus continuis v. 1-3 septatis, ad septa non constrictis  $30 \times 8$ -10.

Hab. in foliis Bromeliae pinguis (Bromeliaceae), in Porto Rico pluribus locis.

2. Perisporium Meliolae F. L. Stevens, Botan. Gazette, 65., 1918, p. 228, 4337 fig. 2. — Mycelio parco, inconspicuo, in mycelio Meliolae parasitico. Peritheciis in coloniis Meliolae centro aggregatis, lenticularibus, magis altis quam latis, 230-280 μ latis, 312 μ altis, superficie breviter denseque tuberculata; ascis numerosis, fasciculatis, 8-sporis, cylindraceis; paraphysibus nullis; sporidiis 31-44 × 7-14, brunneis, plerumque 3-septatis, apicibus inaequalibus uno conoideo altero plus minus rotundato, ad septa praecipue medio constrictis, tunica 2-3 μ cr. extus parum gelatinosa.

Hab. in Meliola Compositarum var. portoricensis Stev. in Eupatorio portoricense (Compositae), Dos Bocas prope Utuado et San Sebastian, Porto Rico. — Habitus peritheciorum sporidiorumque cum Meliola valde affinis.

3. Perisporium portoricense F. L. Stevens, Trans., Illin. Ac. of Sc. v. 4338

X, 1917, p. 169, fig. 1. — Obscure brunneum, orbiculare sparsum amphigenum, 0.5-1 mm. diam., coalescens; mycelio copioso diffuso obscuro levi, ex hyphis ramosis 7-9  $\mu$  cr et angulum rect. inter se efformantibus; hyphopodiis nullis; peritheciis numerosis globulosis, nigris, gregariis, carbonaceis, appendicibus ostiolis paraphysibus destitutis, superficie rugosula praed., 175-270  $\mu$  diam.; ascis cylindraceis octosporis oblongis, obtusis stipitatis, 92-125  $\times$  37-50; sporis curvulis, apice obtusis, basi parum attenuatis, 3-septatis articulis secedentibus, 70-80  $\times$  8-9.

Hab. in foliis Calophylli Calabae (Guttiferue), Mayaguez Mesa, Porto Rico.

4. Perisporium truncatum F. L. Stevens, Trans. Illin. Ac. of Sc., v. X, 4339 1917, p. 167. — Hypophyllum plagulas fumosas 1.2 cm. diam. efformans; mycelio copioso superficiali brunneo, uniformi, ex hyphis 7  $\mu$  cr. septatis ramosis et ramis saepe angulum rectum efformantibus; hyphopodiis nullis; setulis mycelialibus erectis simplicibus, rectis, septatis 310  $\approx$  3,5, basi 8  $\mu$  cr.; peritheciis sphaeroideis astomis, rugosulis, 109-202  $\mu$  cr., carbonaceis, cellulis circ. 17  $\mu$  diam.; ascis e ovoideis cylindraceis, 125  $\approx$  34 tenuiter tunicatis; sporis biseptatis, cylindraceis, 68-92  $\approx$  10, juventute hyalinis, vetustate fumosis v. obscuris, uno apice rotundatis, altero truncato anulatis.

Hab. in foliis Ingae laurinae (Leguminosae), Maricao Mayaguez, El Alto la Bandera, Coamo, Ing. verae, Maricao, Porto Rico, Amer. bor.

5. Perisporium Paulliniae F. L. Stevens, Botan. Gazette, 65., 1918, 4340 p. 228. fig. 1. — Mycelio inconspicuo; peritheciis paucis in coloniis vetustis Meliolae nidulantibus; ascis e basi peritheciorum fasciculatis, 100 v 25, clavatis octosporis; sporidiis inordinatis, e clavato-fusoideis parum irregulariter cylindraceis, 5-septatis, 44 v 10, utrimque rotundato-obtusis, obscure fumosis, cellulis duobus mediis plerumque crassioribus.

Hab. in Meliola Hessii Stev., in Paullinia pinnata (Sapindaceae), Mayagues, Porto Rico. — Habitus peritheciorum sporidiorumque cum Meliola valde affinis.

6. Perisporium Lantanae P. Henn., Hedw. vol. 48 (1908) p. 5. — Pe- 4341 ritheciis hypophyllis, gregariis, in villo nidulantibus, globulosis, atris, cellulosis, 140-180 μ diam., hyphis fuscidulis repentibus, sim plicibus vel ramosis, 3-7 μ crassis circumdatis; ascis oblongo-ovoideis v. clavatis, apice rotundatis, octosporis, 60-80 × 18-20; sporidiis distichis vel conglobatis, fusoideis v. clavatis, curvulis, utrinque

obtuse rotundatis, medio 1-septatis, constrictis, dein 3-septatis olivaceo-fumosis,  $23-32 \times 6-10$ .

Hab. in foliis Lantanae sp. (Verbenaceae), S. Paulo, Capital, Cheara, Brasilia.

#### PERISPORINA P. Henn. - Syll. XVII p. 545.

1. Perisporina Lantanae F. L. Stevens, Trans. Illin. Ac. of Sc. v. X, 4342 1917, p. 170. — Hypophylla copiose feltrata. Mycelio e obscure stramineo nigrescenti, ex hyphis crebre septatis 4 μ circ. cr. hyphopodiis destitutis praedito; peritheciis maturis 110-130 μ diam., globosis astomis, junioribus areolatim radiantibus cinctis, dense setulosis, 70-480 × 7, septatis obscuris, parietibus perithecii dense reticulatis; ascis 61-68 × 17-20, octosporis, paraphysibus hyalinis filamentosis, ramosis obvallatis; sporidiis inordinatis 2-3 septatis, obscuris, 34-37 × 7, cellulis duobus majoribus.

Hab. in foliis Lantanae camarae (Verbenaceae), Lares, Amer. bor.

- \*) MELIOLA Fr. Syll. I p. 60, IX p. 413, XI p. 260, XIV p. 470, XVI p. 413, XVII p. 546, XXII p. 45.
- 1. Meliola irregularis Stevens, Mel. Porto Rico in Illin. Biologic. Mo- 4343 nogr. II 1916, p. 483, fig. 6. Coloniis amphigenis, irregularibus, 1-3 mm. diam., nigris; mycelio dense reticulato, irregulariter ramoso, 7  $\mu$  diam.; hyphis saepe densissimis et contextum formantibus; hyphopodiis capitatis alternis v. irregularibus, crebris, cellula capitata subpiriformi,  $17 \approx 10$ , basilari 3-7  $\mu$  longa; hyphopodiis mucronatis alternis v. oppositis, ampulliformibus, angustis, 20  $\mu$  long.; setis mycelialibus et perithecialibus nullis; peritheciis 200  $\mu$  diam., verrucis conicis 17  $\mu$  altis asperis; ascis bisporis; sporidiis 4-septatis, constrictis, brunneis, obtusis, 41  $\approx$  14, saepe irregularibus, uno apice acutis, cellula una v. pluribus crassioribus, septisque subinde obliquis v. numero vario.

Hab. in foliis Hygrophilae brasiliensis (Acanthaceae), Porto Rico. — Species peritheciis M. glabrae affinis.

2. Meliola hamata H. et P. Sydow, Ann. Mycol. XII, 1914, p. 548.— 4344 Amphigena, plerumque epiphylla, plagulas pelliculosas orbiculares

<sup>\*)</sup> De affinitatibus cum Microthyriaceis cufr. F. v. Höhnel, in Ber. d. deutsch. bot. Ges. Bd. 36., 1918, p. 471.

v. irregulares 3-10 mm. latas nigras tenues parce velutinas formans; mycelio bene radiante, ex hyphis longis dense intertextis obscure fuscis 7-9  $\mu$  cr. ramosis et anastomosantibus composito; hyphopodiis capitatis numerosis, alternantibus, 22-27  $\times$  10-12, elongato-piriformibus, cellula superiore rotundata, inferiore minuta; hyphopodiis mucronatis rarioribus, 22-28  $\mu$  long.; setis mycelicis, numerosis, atris, tota longitudine opacis, semper ad apicem uncinatis, acutis, rarius obtusis, 350-450  $\times$  9-12; peritheciis parcis, sparsis, globulosis, atris, verrucosis, astomis, 200-250  $\mu$  diam.; ascis non visis; sporidiis oblongo-cylindraceis, 4-septatis, constrictis, utrinque late rotundatis, obscure castaneo-brunneis, 45-50  $\times$  17-19.

Hab. in foliis Buchananiae arborescentis (Anacardiaceae), Angat prov. Bulacan, et in prov. Rizal Ins. Philippin. (M. RAMOS). — Mel. Balansae Gaill. proxima a qua differt sporidis minoribus et hyphopodiis mucronatis.

3. Meliola Comocladiae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4845 II, 1916, p. 493, fig. 22. — Coloniis amphigenis, superne copiosioribus, punctiformibus, 1-3 mm. diam.; mycelio reticulato ex hyphis 8 μ diam. plerumque opposite-ramosis; hyphopodiis capitatis alternis, non crebris, 17-20 μ inter se distantibus, cellula capitata piriformi, angulosa et saepe incurva, 20 × 14, basilari 3-5 μ; hyphopodiis mucronatis alternis vel oppositis, ampulliformibus; setis mycelialibus nullis, perithecialibus plus minusve copiosis, rectis, apice plerumque uncinato vel contorto, 115 × 8, ubique fuscis; peritheciis 100-150 μ diam., scabris, areola myceliali radiante cinctis; ascis mox evanidis, tetrasporis; sporidiis 4-septatis, pallide brunneis, lenissime constrictis, cylindraceis, obtusis, 41 × 17.

Hab. in foliis Comocladiae glabrae (Anacardiaceae), nec nou Spondias Mombin (Anacardiaceae), Porto Rico. — Affinis M. tortuosae, a qua tamen differt characteribus mycelii.

4. Meliola opaca Syd. in Leaflets of Philipp. Bot. VI (1913) p. 1924.— 4346 Amphigena, maculas atras velutinas 2-3 mm. latas formans; mycelio ex hyphis longiusculis dense intertextis ramosis fuscis 6-8 μ cr. composito; hyphopodiis capitatis numerosis, alternantibus, oblongo-ovatis, apice obtusis, rectis vel curvatis, bicellularibus, 17-24 × 8-10; hyphopodiis mucronatis raris, ampulliformibus; oppositis, 20-27 μ longis; setis mycelicis numerosissimis, rectis, erectis, rigidis usque ad apicem opacis, subatris, 300-420 × 9-11, apice 2-4-furcatis, dentibus usque ad 16 μ longis; peritheciis aggregatis, globosis, rugulosis, atris, 100-160 μ diam., omnimo inter setas abscon-

ditis; ascis ovatis 2-3-sporis; sporidiis oblongis, utrinque late rotundatis, 4 septatis, ad septa constrictis, fuscis, 30-42 × 13-15.

Hab. in foliis Dracontomeli Dao (Anacardiaceae), Cabadbaran, Mindanao, ins. Philipp.

5. Meliola geniculata Syd. et Butl., Ann. Mycol. IX, 1911, p. 381 - 4347 Mycelio hypophyllo haud maculiformi, tenuissimo, atro, irregulariter effuso, saepe nervos primarios sequente, margine radiante, ex hyphis fuscis septatis 5-6 µ cr. composito; hyphopodiis capitatis alternantibus, 13-16 µ long., cellula basali minuta, superiore clavata; hyphopodiis acuminatis plerumque oppositis, deorsum leniter incrassatis, superne attenuatis et saepe curvatis, usque ad 18 µ long; setis mycelicis sparsis, saepe etiam perithecia circulo laxe circumdantibus, 200-275 µ long. 5-8 µ cr., prope basim abrupte geniculatis, ad apicem bis usque quinquies incisis quasi denticulatis (dentibus brevibus obtusisque), opacis; setis perithecialibus nullis; peritheciis sparsis, paucis, globosis, grosse tuberculatis, atris, 130-170 µ diam.; ascis ovatis, brevissime stipitatis bisporis; sporidiis oblongis v. oblongo-cylindricis, 4-septatis, ad septa constrictis, utrinque rotundatis, fuscis v. sordide brunneis, 35-37,5 \* 12,5-15,5.

Hab. in foliis Odinae Wodieri (Anacardiaceae), Pulliyanur Travancore, Indiae or. — Mel. Anacardii A. Zimmer, proxima. (E. J. BUTLER).

6. Meliola Uvariae Rehm, Ascomyc. Philipp. II, in Philipp. Journ. of 4348 Sei. VIII (1913) p. 251. - Mycelio in epiphyllo haud mutato plagas orbiculares 0,5-2 cm. latas formante, in ambitu fuscidulas, in centro floccose nigras; hyphis mycelii primariis plurimis, rectis, septatis, vix ramosis, dilute fuscidulis, 3-4 µ latis, centrifuge repentibus, itemque hyphis mycelii propriis, arachnoideo-centrifuge extensis, subramosis, septatis, fuscis, circ. 8 µ latis, ambitum plagae tenerum fuscidulum reddentibus; hyphopodiis capitatis plurimis, plerumque monostichis, 2-cellularibus, clavatis, usque ad 20 µ altis, cellula superiore 15-20 µ lata; hyphopodiis uncinatis nullis conspicuis: peritheciis versus centrum plagae sparsis, globulosis, atris, glabris, poro hand pertusis, 250 µ ca. diam.; setis plurimis circa perithecium in mycelio coacervatis, erectis, interdum subcurvatis et verruculosis, septatis, fuscis, apice obtuso dilutioribus, usque ad 350 \mu altis, 7-10 \mu latis; ascis ovato-clavatis, octosporis, aparaphysatis, usque ad 100 \* 25-30; sporidiis distichis, oblongis, rectis, utrinque rotundatis, 3-septatis, medio interdum subconstrictis, de-

mum fuscis, 40 × 10·12. — Adsunt conidia plurima ad hyphas mycelii adnata, interdum hyphopodio opposita, fusiformia, 4-septata, in stipitem hyalinum tenuem elongata, subfusca, usque ad 50 × 9·10.

Hab. in foliis Uvariae (Anonaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Affinis M. insigni Grall. sed notis plurimis distincta.

7. Meliola Tabernemontanae Speg., Mycet. Argent. VI, Anal. Mus. 4349 Nac. Buenos Aires XXIII p. 45 (1912). — Caespitulis epiphyllis, vel laxe gregariis, repando-difformibus, 2-8 mm. latis, aterrimis, eximie velutinis, subiculo submembranaceo; hyphis densissime intertextis, 10 μ cr., rectis vel undulatis, saepius opposite ramosis; hyphopodiis antrorsis, adpressis, alternis vel oppositis, saepius obovatis, 20 \* 10, levibus, non lobulatis; setulis confertiusculis, rectis, 200-300 \* 6-8, opacis, apice obtusissimis, pellucidis, rotundatis vel truncatis; peritheciis globosis, 150-200 μ diam., glabris, atris, grosse verrucosis, non collabescentibus, contextu grosse parenchymatico; ascis ellipsoideis, 2-3-sporis, mox diffluentibus; sporidiis cylindraceis, obtusissimis, 4-septatis, leniter constrictis, subopace fuligigineis, e latere leniter compressis, 35-42 × 15-16 × 12-14, loculis saepius grosse 2-guttulatis.

Hab. in foliis vivis Tabernemontanae histricis in silvis prope Bompland, Misiones: Argentina. — Var. Forsteroniae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 1916, p. 518. — A typo differt setis usque ad 700  $\mu$  longis, apice acuto attenuatis, hyphopodiis capitatis latioribus et magis angulosis. — Hab. in foliis Forsteroniae corymbosae (Apocynaceae), Uaetuado, Porto Rico.

8. Meliola Funtumiae Beeli, Bull. Jard. Bot. Etat. Bruxelles, v. 7., 4350 1920, p. 95. — Amphigena sed plerumque epiphylla, maculas orbiculares atras confluentes 2-6 mm. diam. efformans; mycelio bene evoluto, hyphis rectis, ramis oppositis, brunneis 12-40 × 7-8; hyphopodiis numerosis capitatis, alternis 12 14 × 10, cellula superiori subglobosa v. ovata, basilari brevi 4-6 × 8; hyphopodiis mucromatis paucis, plerumque solitariis elongato-acuminatis; setis mycelicis numerosis, sub peritheciis locatis, atris, septatis, simplicibus, rectis, ad apicem attenuatis 400-500 × 10-12; peritheciis verrucosis, brunneis 100-140 μ diam.; ascis non visis; sporidiis 4-septatis ad septa constrictulis, utrimque obtusis, brunneis, cellulis terminalibus obtusis majoribus, 45-50 × 19-20.

Hab. in foliis Funtumiae sp. (Apocynaceae), Kwango Congo

Africae trop. (VANDERYST). — M. laevigatae Syd. proxima sed differt sporarum et setarum mycelii statura.

9. Meliola laevigata Syd. in Leaflets of Philipp. Bot. V (1912) p. 1537.— 4351 Mycelio hypophyllo, plagulas discoidales 3·10 mm. latas atras efformante, ex hyphis longiusculis, remotiuscule ramosis, fuscis, 5·7 μ crassis composito; hyphopodiis mucronatis oppositis, sat numerosis, 15·20 μ longis; hyphopodiis capitatis clavatis, rectis vel leniter curvulis, saepe leniter lobatis aut angustatis, 2·cellularibus, 20·25 × 8·13; setis mycelicis rectis, erectis, simplicibus, opacis, apice acutis, 350·700 × 7·10; peritheciis in mycelio sparsis, globosis, in sicco collapsis, atris, levibus, haud rugosis, 130·156 μ diam.; ascis ovatis, 40·60 × 25·45, bisporis; sporidiis oblongis, utrinque late rotundatis, 4-septatis ad septa constrictis, obscure brunneis, 40·44 × 16·20.

Hab. in foliis Paralstoniae clusiaceae (Apocynaceae), Puerto Princesa, Palawan, ins. Philipp.

10. Meliola Strophanthi Doidge, Trans. R. Soc. South. Afr. V, 1917, 4352 p. 729 et 745, t. 62 fig. 23.— Amphigena, plerumque, hyphophylla, subcrustacea; maculas minutas, atras, orbiculares, 1-2 mm. diam., efficiens: mycelio peritheciigero ex hyphis flexuosis, 6-9 μ crassis, e cellulis ca. 18 μ longis compositis, brunneis, ramis oppositis; hyphopodiis capitatis alternis, breviter stipitatis, 20-25 μ long., cellula superiore cylindrica, recta v. leniter curvata, convexa, 16-18 × 7-9; hyphopodiis mucronatis paucis, ampullaceis, ca. 18 μ long.; setis mycelicis nullis, peritheciis paucis, congregatis, atris, globosis 215-250 μ diam., verrucosis; ascis maturis non visis; sporidiis 4-septatis, cylindricis, ad septa vix constrictis, utrinque rotundatis, 40-45 × 15-18, mycelio conidiifero inter mycelio peritheciigero intertextis, pallidiore tenuiore; conidiophoris numerosis, erectis septatis, brunneis, 180-200 μ long.; conidiis fusiformibus 3-septatis, 18-32 × 5-9.

Hab. in foliis Strophanthi speciosi (Apocynaceae), Woodbush Zoutpansberg Dist. (E. M. DOIDGE).

11. Meliola Trachelospermi H. S. Yates, The Philipp. Journ. of Sc., 4353 Bot. 13., 1918, p. 370 (corr. trachelospermae). — Maculas hypophyllas, atras, subpelliculosas, orbiculares 2-5 mm. diam., vel confluentes efformans mycelio abundante ex hyphis brunneis 7-9 μ crassis formato, ramis oppositis; hyphopodiis capitatis numerosissimis, alternantibus, cellula superiore ovata, 13-16 × 10, cellula inferiore 5-10 μ longa; hyphopodiis mucronatis numerosis, plerumque alternantibus, usque ad 18 μ longis; setis mycelicis paucis, rectis,

erectis, acutis, atris, opacis, 300-400  $\mu$  longis, ad basim 8  $\mu$  cr.; peritheciis globosis, atris, opacis 180 200  $\mu$  diam.; sporidiis 4-septatis, elongatis, utrinque late rotundatis, ad septa constrictis, brunneis, 35-40  $\times$  16-20.

Hab. in foliis Trachelospermi (Apocynaceae), Mount Lumutan, Prov. Rizal Luzon Ins., Philipp. (RAMOS et EDAÑO).

12. Meliola depressula Syd., Ann. Mycol. 15., 1917, p. 186.—Amphigena, 4354 plagulas orbiculares 2-3 mm. diam., atras convexas in aversa folii pagina maculam depressam efficientes velutinas formans; mycelium parce evolutum, ex hyphis brevibus dense ramosis copiose septatis obscure brunneis 6-8 μ latis compositum; hyphopodia capitata alternantia, 12-15 μ longa, cellula superiore 9-11 μ lata late rotundata semper integra subglobosa vel ovata, cellula inferiore brevissima saepe vix conspicua, hyphopodia mucronata rara; setae myceliales circa perithecia densissime stipatae, copiosissimae, 170-230 μ longae, 6-8 μ latae, ad apicem plerumque uncinatae, tota longitudine opacae; perithecia globosa, 150-230 μ diam., glabra, levia; asci facile diffluentes; sporae cylindraceae, 4-septatae, non vel vix constrictae, utrinque obtusae, flavo-brunneae vel dilute brunneae, 28-30 × 10-12.

Hab. in foliis Urceolae imberbis (Apocynaceae), in collibus pr. Paete, Laguna, Ins. Philipp. (C. F. BAKER).

13. Meliola amphitricha Fr. — Syll. I p. 63, Add. II, IV. — var. pun- 4355 gens Patouillard, Bull. Soc. Mycol. de Fr., XXXIV, 1918, p. 89.— A typo recedit hyphis setuliformibus curvato-flexuosis nec rigidis, apice distincte acutis nec obtusis.

Hab. in foliis Vincae et Pittospori (Apocynaceae), in Ins. Madagascar (VIGUIER).

14. Meliola Wrightiae H. S. Yates, The Philipp. Journ. of Sc., Bot. 13., 4356 1918, p. 371. — Amphigena, plerumque epiphylla et totam folii superficiem (plus minus continua aterrima) obducens; maculae orbiculares 3-6 mm. diam.; mycelio ex hyphis densissime intertextis brunneis septatis anastomosantibus composito; ramis alternantibus vel oppositis; hyphopodiis capitatis numerosis, plerumque alternantibus, subglobosis vel ovatis, 12 μ longis 10-12 μ latis, cellula inferiore ca. 6 μ longa, hyphopodiis mucronatis paucis, irregularibus vel oppositis, ampulliformibus, usque ad 18 μ longis; setis mycelicis numerosis, erectis, rectis vel leviter curvatis, 200-225 μ longis 6-8 μ latis, saepe ad basim geniculatis, obtusis, obscure brunneis vel versus apicem dilutioribus et fuscis; peritheciis nu-

merosis, globosis 120-150 µ diam., atris, opacis, tuberculatis, in sicco collapsis; ascis ovatis, 30 \* 20 bisporis, mox evanescentibus; sporidiis cylindraceis, utrinque late rotundatis, fuscis, 4-septatis, ad septa leviter constrictis, 27-35 \* 12-16.

Hab. in foliis Wrightiae laniti (Apocynaceae), Prov. Rizal (RAMOS), Faal Volcano in Prov. Batangas (MERRILL), Luzon Ins. Philipp.

15. Meliola maricaensis Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4357 II, 1916, p. 499. — Coloniis hypophyllis, irregularibus, sparsis, 5-15 mm. diam., confluentibus, hyphis atris, 7 µ crassis, irregulariter ramosis, laxe reticulatis; hyphopodiis capitatis alternis vel irregularibus, 30-70 µ inter se distantibus, cellula capitata ovoidea vel piriformi vel etiam obpiriformi, angulosa, irregulari, 17 × 10, basilari 5-7 µ longa; hyphopodiis mucronatis alternis vel oppositis, phialiformibus, 16-18 × 7; setis mycelialibus nullis, perithecialibus paucis, 3-10, rectis vel apice parum curvulis, 100-150 > 7, fuscis, apice obtusis; peritheciis 170 μ diam., scabris; ascis mox evanidis; sporidiis 4-septatis, brunneis, leniter constrictis, utrinque obtusis, 48 \* 20.

Hab. in foliis Ilicis nitidae (Aquifoliaceae), Maricao, Porto Rico. — M. Cupaniae affinis, a qua differt structura hyphopodiorum.

16. Meliola Boerlagiodendriae H. S. Yates, The Philipp. Journ. of Sc., 4358 Bot. 13., 1918, p. 365. - Maculas amphigenas, atras, primo orbiculares, 5-10 mm. diam., deinde confluentes et magnam partem folium occupantes efformans, mycelio abundante, ex hyphis obscure brunneis et subopacis 7-8 µ diam. composito; hyphopodiis capitatis numerosis, alternantibus unilateralibus vel irregularibus, cellula superiore subglobosa, 12-14 µ diam., cellula inferiore 4-5 µ longa; hyphopodiis mucronatis paucis, usque ad 16 μ longis; setis numerosissimis, erectis, dichotome furcatis, opacis, atris, ad basim 8 μ latis; peritheciis paucis, globosis, atris, opacis, tuberculatis, 150-200 µ diam.; ascis non visis; sporidiis 4-septatis, ad septa constrictis, subcylindraceis, utrinque rotundatis, obscure brunneis,  $30-50 \times 12-15$ .

Hab. ad folia Boerlagiodendri (Araliaceae), Mount Binuang Prov. Tayabos Luzon, Ins. Philipp. (RAMOS et EDAÑO).

17. Meliola Dieffenbachiae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4359 II, 1916, p. 530, fig. 56. - Coloniis amphigenis sed in epiphyllo typice paullo copiosioribus, in hypophyllo contra latioribus, 1-5 mm. diam., atris, velutinis; mycelio dense intricato-contexto, ramis sae-

pius oppositis; hyphopodiis capitatis alternis vel oppositis, oblongis, sphaerioideis vel curvis, cellula basilari 4  $\mu$ , capitata, 10-14  $\mu$  longa; hyphopodiis mucronatis paucis alternis vel oppositis; setis mycelialibus rigidis, atris, rectis, 400  $\mu$  circ. longis, apice breviter ramosis vel tantum denticulatis, dentibus forma et magnitudine variis; setis vel appendicibus perithecialibus nullis; peritheciis in centro coloniae gregariis, copiosis, 140-170  $\mu$  diam.; ascis mox evanidis, 2-4-sporis; sporidiis cylindraceis, 40  $\approx$  14, utrinque obtusis, 4-septatis, ad septa leniter constrictis, cellulis terminalibus paullo latioribus.

Hab. in foliis Dieffenbachiae sequines (Araceae), Porto Rico. — Affinis M. fuscidulae sed characteribus setarum facile dignoscenda.

18. Meliola Philodendri Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4360 II, 1916, p. 528, fig. 54. — Coloniis praecipue epiphyllis, circularibus, atris, 1-5 mm. diam., velutinis; mycelio rudi, 8 μ cr., recto, ramis oppositis, prope coloniae marginem setoso; hyphopodiis capitatis plerumque oppositis, 20-30 μ inter se distantibus, cellula basilari brevi, 3 μ, cellula capitata ovoidali, non angulata, 14 × 10; hyphopodiis mucronatis parcis, ampullifermibus, alternis vel oppositis, saepe curvis; setis mycelialibus 230-300 μ longis, basi 9 μ cr. atris, apice 3-pluries dichotomice furcatis, ramis circ. 120 μ longis, ultimis acutis; peritheciis 185 μ circ. diam.; sporidiis cylindraceis, obtusis, 4-septatis, leniter constrictis 48-54 × 15-20, interdum vero tenuioribus et magis constrictis, submoniliformibus.

Hab. in foliis Philodendri Krebsii (Araceae), Porto Rico. — Species notis variis bene distincta.

19. Meliola leptidea P. et H. Syd., Ann. Mycol. X, 1912, p. 38. — My-4361 celio epiphyllo, plagulas orbiculares 2 4 mm. diam. velutinas subinde confluentes efformante, ex hyphis 8-11 μ cr. obscure castaneo-brunneis laxe ramosis composito; hyphopodiis capitatis nume rosissimis, dense confertis, alternantibus v. saepe oppositis, 18-28 μ long., cellula superiore ovata v globulosa 10-15 μ cr. obtusa; hyphopodiis mucronatis rarioribus usque 25 μ long.; peritheciis laxe gregariis, globosis, atris, in sicco leniter collapsis, asperulis, 250 300 μ diam.; setis mycelicis numerosissimis, 200-300 μ long. 8-11 μ crassis, rectis, erectis, rigidis, opacis, superne in ramos duos longos (usque 130 μ long.) patenter leniter incurvatis divisis, ramis iterum in ramulos duos variae longitudinis 30-80 μ long. ad apicem bifurcatos divisis; ascis ovatis, 50-60 × 28-40, 2-3-sporis; sporidiis

oblongis, utrinque late rotundatis, 4-septatis, ad septa constrictis, fuscis,  $45-55 \approx 15-20$ .

Hab. in foliis Cussoniae sp. (Araliaceae), Woodbush, Zoutpansberg Distr., Transvaal (C. E. LEGAT). — Ab affinibus speciebus differt ramificatione setularum diversa.

20. Meliola Hoyae Sacc., Notae Myc. XXIII p. 60 (Accad. Ven. Trent. 4862 1917). — Plagulis imprimis epiphyllis, e subcirculari irregularibus, 3-5 mm. latis (saepe in Gloeosporio parasiticis), opace nigricantibus; hyphis radiantibus, ramosis, 7-8 μ cr.; hyphopodiis capitatis, 18-19 × 11-12, uniseptatis, fulvo fuligineis, copiose praeditis; hyphopodiis mucronatis non observatis; peritheciis globulosis, obsolete ostiolatis, 80-90 μ diam.; setis interspersis rarissimis, 300 × 11-12, aterrimis; sporidiis oblongis, utrinque rotundatis constricto-4 septatis, 42-44 × 14-15, fuligineis.

Hab. in foliis emortuis Hoyae luzonensis (Asclepiadaceae), socio Gloeosporio Hoyae, Los Baños, Ins. Philipp. — Affinis Mel. Montagnei et M. Uleanae.

21. Meliola Telosmae Rehm, Ascomyc. Philipp. III, in Philipp. Journ. 4363 of Sci. VIII (1913) p. 392. — Mycelio plerumque epiphyllo, plagas velutinas, atras, orbiculares, 0,5-2 mm. latas, demum plus minusve late confluentes formante; hyphis rectis, sparse acutanguliter ramosis, fuscis, 5-7 μ cr., hyphopodiis capitatis plurimis, elongato-ovoideis, 2-cellularibus, alternantibus vel oppositis, usque ad 18 × 5-6, hyphopodiis mucronatis plerumque oppositis usque ad 20 × 6-8 obsessis; setis mycelialibus erectis, ad basim subcurvatis, apice acutatis, fusco-nigris, crebris, usque ad 250 μ longis, 5-7 μ cr.; peritheciis in medio mycelii paucis aggregatis, globulosis, haud rugosis, astomis, atris, ad 150 μ latis; ascis ovatis, 2-4-sporis 40-45 × 25; sporidiis oblongis, utrinque rotundatis, 4-septatis, haud constrictis, olivaceo-fuscis, 25-30 × 10-12.

Hab. ad folia Telos mae procum bentis (Asclepiadaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER). — M. microsporae Pat. et Gaill. affinis; differt setis acutatis et usque ad apicem fusco-brunneis.

22. Meliola perpusilla Syd., Enum. Philipp. Fungi II, in Philipp. 4364 Journ. of Sci. VIII (1913) p. 480. — Epiphylla, rarius caulicola, maculas minutissimas 0,4-1 mm. latas atras efformans; mycelio radiante ex hyphis longis, remote ramosis, brunneis; 8-10 μ latis composito; hyphopodiis capitatis tereti-cylindraceis, rectis, erectis, brunneis, 16-24 × 8,5-10, cellula basali minuta; hyphopodiis mucro-

natis non visis; setis mycelicis simplicibus, rectis vel leniter flexuosis, apice acutis, inferne subopacis, sursum plerumque pellucidis,  $200\text{-}320 \times 8\text{-}10$ ; peritheciis 1.4 in quaque macula, globosis, atris, in sicco profunde umbilicatis,  $100\text{-}150~\mu$  diam., contextu parenchymatico e cellulis 8-10  $\mu$  diam. composito; ascis ovatis, 2-4-sporis,  $30\text{-}42 \times 20\text{-}30$ ; sporidiis oblongis, utrinque late rotundatis, 4-septatis, ad septa leniter constrictis, fuscis,  $24\text{-}28 \times 11\text{-}13$ .

Hab. in foliis caulibusque vivis Tylophorae, Luzon, Prov. Nueva Vizcaya, ins. Philipp. — Maculis minutissimis, hyphopodiis tereti-cylindricis et sporidiis augustis praecipue distincta. — Var. congoensis Beeli, Bull. Jard. Bot. Etat Bruxelles, v. 7., 1920, p. 97.— A typo recedit peritheciis (150-180  $\mu$ ) et sporidiis (35-38  $\times$  13-16) majoribus, setis mycelicis rarioribus sparsis pellucidis simplicibus rectis septatis ad apicem acutis, hyphopodiis capitatis alternis v. unilateralibus, cellula superiori ovata 15-17  $\times$  10.

Hab. in foliis Asclepiadacearum, Kikwit Congo, Africae trop. (VANDERYST).

23. Meliola dentifera Syd., Ann. Mycol. 14., 1916, p. 78, fig. 3. — Hypophylla, plagulas minutas orbiculares aterrimas subvelutinas hand confluentes, 1-2 mm. diam., formans; mycelio ex hyphis fuscis 6-9 μ crassis dense ramosis composito, rete densissimum formante; hyphopodiis capitatis numerosis, integris, ovatis vel subglobosis, 12-16 μ longis, cellula superiore 10-14 μ lata globulosa vel late ovata, inferiore brevi; hyphopodiis mucronatis oppositis, usque 20 μ longis; setis mycelicis numerosissimis, rectis vel subrectis, 150-220 × 9-11, atris, opacis, raro superne subpellucidis, ad apicem sive dentibus numerosis sed brevissimis 1-2,5 μ tantum longis coronatis, sive bifidis in ramos breves crassos divisis et ramis his ad apicem dentibus pluribus instructis; peritheciis dense gregariis, globosis, astomis, non tuberculatis, 100-150 μ diam.; ascis ovatis 2-4-sporis; sporidiis breviter cylindraceis, 4-septatis, non vel parum constrictis, sordide brunneis, 22-28 × 11-12.

Hab. in foliis Arrabidaeae nicotianiflorae (Bignoniaceae), Seringal, San Francisco Rio Acre, Brasiliae (E. ULE).

24. Meliola lanceolato-setosa H. et P. Sydow, Ann. Mycol. XII, 1914, 4866 p. 197. — Epiphylla, plagulas orbiculares 1-4 mm. latas sparsas atras velutinas crassas efficiens; mycelio ex hyphis fuscis septatis 9-11 μ crassis densissime intertextis composito; hyphopodiis capitatis numerosissimis, alternantibus v. dense aggregatis, 22-28 μ long., cellula superiore globulosa usque ovata 10-14 μ lata; hypho-

podiis mucronatis non visis; setis mycelicis copiosissimis, rectis v. subrectis, tota longitudine opacis, atris, 250-350  $\mu$  long. 9-12  $\mu$  latis, sursum abrupte acuminatis; peritheciis numerosissimis in quoque plagula, globosis, atris, in sicco collapsis, astomis, modice tuberculatis, 150-220  $\mu$  diam.; ascis ovatis, 2-sporis; sporidiis oblongo-cylindraceis, utrinque rotundatis, 4-septatis, non v. parum constrictis; sordide brunneis, 42-46 \* 12-16, cellulis subaequalibus.

Hab. in foliis vivis Markhamiae sp. (Bignoniaceae), prope Tengeni, Africa orient. (GROTE). — Mel. francavilleanae Gaill. proxima, sed hyphopodiis et sporis diversa.

25. Meliola glabroides Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4367 1916, p. 486, fig. 13. — Coloniis amphigenis, plerumque vero epiphyllis, irregulariter circularibus, 1-8 mm. diam.; mycelio atro laxe reticulato, 7 μ diam., ramis utplurimum oppositis, saepe rectangulariter divaricatis; hyphopodiis capitatis alternis, non crebris, uno pro cellula, cellulis 30 μ circ. longis, cellula capitata ovoidea, interdum angulosa, 17 × 14, basilari 7 μ longa; hyphopodiis mucronatis paucis, alternis vel oppositis, ampulliformibus, 16-18 × 6; setis nullis; peritheciis 100-140 μ diam., papillis rotundatis asperatis; ascis mox evanidis; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis, 41-17.

Hab. in foliis Piperis, Nectandrae, Simarubae, Sauvagesiae, Solani, etc., Porto Rico. — Var. Schlegeliae Stev., l. c. p. 488. — Differt hyphopodiis capitatis magis angularibus et contextu coloniarum paullo densiore — Hab. in foliis Schlegeliae sp. (Bignoniaceae), El Alto de la Bandera, Porto Rico.

26. Meliola Tecomae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4368
1916, p. 521, fig. 48. — Coloniis amphigenis, plerumque epiphyllis, circularibus, 2-5 mm. diam.; mycelio atro dense contexto, hyphis
7 μ cr. ramis plerumque oppositis; hyphopodiis capitatis alternis, haud crebris, uno pro cellula, cellulis 35 μ circ. longis, cellula capitata ovoidea, 17 \* 13, basilari 6-10 μ longa; hyphopodiis mucronatis oppositis, irregulariter conicis, 15-18 \* 6, collo non perfecte distincto; setis perithecialibus nullis, mycelialibus copiosis, apice late uncinato-incurvis, 170 × 10, ubique fuscis, apice obtusis; peritheciis 70 μ diam., leviter scabris; ascis mox diffuentibus; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis, 44 \* 17.

Hab. in foliis Tecomae spp. (Bignoniaceae), Porto Rico. 27. Meliola peruviana Syd., Ann. Mycol. 14., 1916, p. 75. — Hypophylla, 4369 plagulas griseolas vel olivaceas laxas parum perspicuas 1-3 mm. latas formans; mycelio parcissimo, ex hyphis tenuiter tunicatis remote septatis 2-3 a latis, pallide olivaceis haud hyphopodiatis composito; setis paucis, erectis, rigidis, septatis, 80-150 μ altis, 5-7.5 μ latis; peritheciis numerosis, dense stipatis, breviter pedicellatis. ovato-oblongis vel difformibus, plerumque utrinque attenuatis. 50-70 μ altis, medio 28-35 μ latis, apice obtusis, vix ostiolatis, contextu tenaci membranaceo ex cellulis polygonalibus 8-10 µ diam. pellucidis composito, monascigeris; ascis primitus globosis, dein ovatis vel oblongis, 42-55 \* 18-28, octosporis aparaphysatis; sporidiis distichis, bicellularibus, non vel vix constrictis, utrinque rotundatis, pallide flavo-brunneolis, 16-20 × 7-8.

Hab. in foliis Bignoniaceae, Seringal, Auristella, Rio Acre Peruviae (E. ULE).

28. Meliola Canarii H. et P. Sydow, Ann. Mycol. XII, 1914, p. 550. - 4370 Epiphylla, plagulas parum perspicuas indeterminatas 2-10 mm. latas saepe confluentes efformans; mycelio eximie radiante, matrici arcte adpresso, ex hyphis rectis centrifugis fuscis septatis, 7-10 µ latis. ramosis composito; hyphopodiis alternantibus, numerosis, cylindraceo-clavatis, 22-32 \* 10-14, cellula basali plerumque brevi, superiore ellipsoidea v. ovato-rotundata, castaneo-brunneis; hyphopodiis mucronatis rarioribus, oppositis, fuscis, usque 22 µ long.; setis mycelicis sat numerosis, opace fuscis, leniter falcato-curvatis, leniter flexuosis v. subrectis, 300-550 µ long., ad basim 8-10 µ latis, sursum sensim attenuatis, ad apicem acutis v obtuse attenuatis; peritheciis solitariis v. paucis in quaque plagula, globulosis, 130-175 μ diam., haud verruculosis; ascis?; sporidiis oblongis, rectis, utrinque late rotundatis, castaneo-brunneis, 4-septatis, constrictis,  $40.45 \times 14-20$ .

Hab. in foliis Canarii villosi (Burseraceae), prov. Nueva Vizcaya Luzon (R. C. Mc GREGOR) et Mt. Marivelos prov. Bataan Luzon, Ins. Philippin. (P. W. GRAFF). - Vix differt species sequens.

29. Meliola nigro-rufescens Sacc., Notae Myc. XXIII p. 60 (Accad. 4371 Ven. Trent. 1917). - Plagulis amphigenis sed epiphyllis copiosioribus, nigricantibus, 68 mm. diam., interdum confluentibus, subcircularibus; hyphia radiantibus hyphopodiis capitatis et mucronatis typicis praeditis; setis copiosis, acutis, saepius incurvatis, opacissimis, 400-500 × 6; peritheciis globulosis, 160-200 μ diam., nigricantibus sed contextu grosse celluloso, rufo-fusco, extus colliculoso praeditis; cellulis contextus 10-12 µ diam.; ascis ellipsoi-

deis,  $45.50 \times 28.30$ , bisporis; sporidiis constricto-4-septatis,  $35.43 \times 15.17$ , fuligineis.

Hab. in foliis Canarii sp. (Burseraceae), Los Baños, Ins. Philipp.

30. Meliola Bosciae Doidge, Trans. R. Soc. South. Afr. V, 1917, p. 731 et 4372 745, t 61, p. 26. — Epiphylla, rarius hypophylla, pelliculas tenues, suborbiculares, nigras, 2-3 mm. latas formans, hyphis radiantibus. circa perithecia crebre anastomosantibus, fuscis septatis plerumque curvatis, vermiculatis, 5,5-9 \( \mu\) crassis; ramis oppositis, v. unilate. ralibus; hyphopodiis capitatis alternis v. unilateralibus, rarius oppositis, breviter stipitatis, 14-20 µ long., cellula superiore 10,5-16 µ long., scabra convexa, truncata et sub-lobata; hyphopodiis mucronatis plerumque prope perithecia, in ramis separatis v. inter hyphopodia-capitata sparsis, oppositis v. unilateralibus, ampullaceis, apice interdum uncinatis, 14-18 µ long., basi ca. 7 µ crassis; setis mycelicis nullis; peritheciis globosis, atris, verrucosis 160-180 µ diam., appendiculis 6-12 sparsis, simplicibus, 70-90 µ long., basi subbulbosis, ca. 6 µ crassis, ad apicem obtusum pellucidum attenuatis, rectis v. infra apicem abaupte curvatis; ascis 2-3-sporis, ovatis, breviter pedicellatis, mox evanescentibus; sporidiis atro-brunneis, 4-septatis constrictis, utrinque rotundatis, 39-47 \* 10,5-17,5.

Hab. in foliis Bosciae Caffrae (Capparidaceae), Winkle Spruit Natal (E. M. DOIDGE).

31. Meliola Viburni Syd., Ann. Mycol. 15., 1917, p. 193. — Epiphylla, 4373 plagulas minutas orbiculares 1-2 mm. diam. formans; mycelium densissimum, radians, ex hyphis septatis copiose ramosis anastomosantibus 9-10 μ crassis irregularibus saepe subtorulosis compositum; hyphopodia capitata numerosa, alternantia, piriformia, recta vel curvata 22-28 μ longa, cellula superiore 14-16 μ lata, inferiore brevi, hyphopodia mucronata non visa; setae typice nullae (vide infra); perithecia pauca in quaque plagula, globosa, 200-260 μ diam., in sicco collapsa, astoma, aterrima; asci 2-4-spori; sporae oblongae, utrinque rotundatae, fuscae, 4-septatae, leniter constrictae, 42-48 × 13-19.

Hab. in foliis Viburni odoratissimi (Caprifoliaceae), Benguet, Luzon Ins. Philipp. (H. S. JATES).

32. Meliola ditricha (K. et Cke) Doidge, Trans. R. Soc. South Afr. V, 4374
1917, p. 745. t. 60 fig. 20. — Ita vocanda Asterina ditricha K. et
Cke — Syll. I, p. 50. — Perithecia globosa; sporidia 4-septata, 54

25, atro-brunneae.

Hab. in foliis Celastri sp. (Celastraceae), Inanda. Natal Afr. (WOOD).

33. Meliola Gymnosporiae P. et H. Syd., Ann. Mycol. X, 1912, p. 79. 4375 Amphigena, plerumque epiphylla, crustacea, superficialis; mycelio ex hyphis dense intertextis 8-9 µ cr. brunneis composito et maculas atras minutulas, 0,5-2 mm. diam., efformante; hyphopodiis numerosissimis capitatis, alternantibus ca. 15 µ long., superne 10 µ cr.: setis nullis: peritheciis aggregatis, globosis, atris, 140-175 u diam., rugulosis; ascis 2-4-sporis mox evanidis; sporidiis oblongis utrinque rotundatis 4-septatis, leniter constrictis, fuscis, 33-40 

Hab. in foliis Gymnosporiae spinosae (Celastraceae), prope Manila Ins. Philippin., America Centr. (E. D. MERRILL).

34. Meliola speciosa Doidge, Trans. R. Soc. South Afr. V, 1917, p. 726 4376 et 744, t. 60 f. 15. — Maculis hypophyllis, rotundatis, atris 1.5 mm. diam., hyphis ramosis demum anastomosantibus, usque ad 11 µ crassis, brunneis, cellulis ca. 18 µ longis compositis; hyphopodiis capitatis numerosis, speciosis, alternis, stipitatis; cellula basali 7-11 > 5.5-7, prope hyphae angustiora, capitulo latiore quam longiore, 18-21,5 \* 21,5-25, irregulari, 2-4 lobo, quoque lobo leviter bilobato; hyphopodiis mucronatis raris, pallidioribus, tenuibus, arcuatis ca. 25 × 7; setis nullis; peritheciis aggregatis, atris, 125-265 µ diam., basi appendiculis numerosis, subcylindraceis, basi 18 μ crassis; ascis 2-sporis, evanescentibus; sporidiis ellipsoideis, 3-septatis, leniter constrictis, brunneis, 52-61 × 21,5-25; conidiphoris erectis, atrofuscis, septatis, ca. 150 µ longis; conidiis fusoideis, 4-septatis, fuscis.

Hab. in foliis Gymnosporiae sp. (Celastraceae), Woodbush, Zontpausberg Dest. (E. M. DOIDGE). - M. mamae affinis.

35. Meliola Tehoniana Trotter n. nov. - Meliola conferta L. R. Tehon, Bot. 4377 Gazette 67., 1919, p. 502, tab. XVIII fig. 17-19, nec Doidge 1917.— Maculis amphigenis irregulariter circularibus, punctiformibus, 0,5-1 mm. diam.; mycelio brunneo, dense compacto, radiato, ramulis oppositis praedito, hyphis 8 µ cr.; hyphopodiis capitatis oppositis, hiuc inde confertis intricatis, cellulis apicalibus e conoideis sphaeroideis, 18 × 12, cellula basali 3-6 μ longa; hyphopodiis mucronatis paucis, oppositis plerumque subapicalibus, phialaeformibus 18 µ long.; setis mycelicis nullis, perithecialibus paucis 6-8, apice obtusis, rectis, 80 × 7; peritheciis rugosis 120-135 µ diam.; ascis bisporis [?] mox evanidis; sporidiis brunneis, 4-septatis, obtusis, septis

constrictis,  $40 \times 15$ .

Hab. in foliis Rhacomatis crassopetali (Celastraceae), Mona Island, Porto Rico. — Mel. parethesicolae Stev. proxima.

36. Meliola nigra Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 1916, 4378 p. 505. — Coloniis aterrimis, setoso-velutinis, amphigenis sed in epiphyllo magis copiosis, circularibus, 1-10 mm. diam., mycelio dense reticulato-contexto, ex hyphis 7 μ cr., plerumque opposite ramosis et ramis subrectangularibus divergentibus constituto; hyphopodiis capitatis alternis, non crebris, 17 μ circ. inter se distantibus, cellula capitata obovata vel piriformi vel angulata, 14 × 10, basilari brevi, hyphopodiis mucronatis oppositis, ampulliformibus, 17 μ longis; setis perithecialibus nullis, mycelialibus copiosis, coloniam totam, margine extremo vix excepto, tegentibus, 200-270 × 7-9, ubique fuscis, curvis, saepe apice recurvis, apice obtusis; peritheciis 150-160 μ diam., leniter scabris; atris bisporis; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis, 37-41 × 14-17.

Hab. in foliis Lagunculariae racemosae (Combretaceae). Guanajibo et Jovuda, Porto Rico.

37. Meliola Compositarum Earle — Syll. XXII p. 51. — Var. portori- 4379 censis Stev., Mel. Porto Rico, in III. Biol. Monogr. II, 1916, p. 490.— Differt mycelio valde crassiore, rude, appendicibus latioribus et magis irregularibus quam in typo.

Hab. in foliis Eupatorii (Compositae), Porto Rico.

38. Meliola cyclopode Stev., Mel. Porto Rico in Ill. Biol. Monogr. II, 4380 1916, p. 484, fig. 9. — Coloniis epiphyllis, circularibus, 1-5 mm. diam.; mycelio atro, reticulum laxum efformante, 7 μ diam., ramis plerumque oppositis; hyphopodiis capitatis minutis, alternis, non valde crebris, uno pro cellula, cellulis 20-35 μ longis; cellula capitata subglobosa, 14 × 14, basilari 3-7 μ longa; hyphopodiis mucronatis oppositis, ampulliformibus, 10-18 × 6; setis mycelialibus et perithecialibus nullis; peritheciis 135-170 μ diam., verruculis conoideis asperatis; ascis mox fugacibus; sporidiis 4-septatis, brunneis, leviter constrictis, obtusis, 38 × 14.

Hab. in foliis Pseudelephantopodi spicați (Compositae), Vega Baja, Porto Rico.

39. Meliola peltata Doidge, Trans. R. Soc. South Afr. V 1917, p. 727, 4381 et 744, t. 61, fig. 18. — Amphigena; maculas atras, rotundatas, pilosas, 3-7 mm. latas, interdum confluentes efficiens; mycelio peritheciigero pseudo-parenchymatico, peltiformi v. flabelliformi, composito ex hyphis fuscis, ramosissimis, crebre septatis, cellulis ca.

5,5-7 × 11; hyphopodiis capitatis alternis et ramos appressis, subclavatis, stipitatis, 39-50  $\mu$  longis, cellula superiore compressa, plerumque tuberculata v. sublobulata, 28-32  $\mu$  long.; hyphopodiis mucronatis non visis; setis mycelicis numerosis, simplicibus, 10-11  $\mu$  crassis, usque ad 830  $\mu$  longis, nigris, opacis, apice acuto; peritheciis paucis, in plagulis sparsis, atris, scabris vel non, ascis non visis; sporidiis 3-septatis, nonnunquam 2-septatis et constrictis, utrinque ca.  $50 \times 29$ ; mycelio conidiifero inter mycelio peritheciigero intertextis tenuiore pallidiore; conidiophoris brunneis, torulosis, flexuosis, usque ad 500  $\mu$  longis; conidiis fusiformibus non septatis.  $16\text{-}18 \times 10\text{-}11$ .

Hab. in foliis Podocarpi Thunbergii (Coniferae), Huysna, Cap. Bonae Sp. (P. I. PIENAAR).

40. Meliola Podocarpi Doidge, Trans. R. Soc. South Afr. V, 1917, 4382 p. 725 et 723, t. 59 fig. 14. — Amphigena, plerumque epiphylla, maculas atras tenues, 2-5 mm. diam. efficiens; hyphis rectis v. subsinuosis, 6-7 μ crassis, fuscis; hyphopodiis capitatis alternis, breviter stipitatis, 14·15 μ long., cellula superiore globosa 10·12 × 10·11; hyphopodiis mucronatis non visis, setis mycelicis nullis; peritheciis sparsis v. subaggregatis, atris, globosis, verrucosis, 200·250 μ diam.; ascis 2-4 sporis; sporidiis 3-septatis, ad septa valde constrictis, leniter curvatis, utrinque attenuatis et rotundatis, 50·56 × 14·16.

Hab. in foliis Podocarpi Thunbergii (Coniferae), Woodbush, Zoutpansberg Dist. (E. M. DOIDGE), P. elongatae, Fort Cunningham, Toise River Huysna, C. B. S. (P. I. PIENAAR).

41. Meliola pitya Sacc., Notae Myc. Ser. XX, Nuovo Giorn. Bot. it. 4383 23., 1916, p. 185. — Maculis amphigenis, interdum ramulicolis, effusis, continuis, opace nigricantibus, oblongis, 2-3 mm., subinde dimidium folium occupantibus, margine erosis; mycelio eximie reticulato, adpresso, hyphis filiformibus pinnato-anastomosantibus rufo-fuligineis, septatis, 7-10 μ cr., hyphopodiis obovoides, prope basim 1-septatis, 12-14 × 12, pinnatim subalterne dispositis, omnibus conformibus; setis nullis; peritheciis initio globosis, 90-100 μ diam., demum collabescendo umbilicato-subcupulatis 150-180 μ diam., opace nigris, contextu parenchymatico, fuligineo; ascis sporidiisque non visis.

Hab. in foliis ramulisque adhue vegetis Taxi canadensis (Coniferae), Caroga, N. Y., Amer. bor. — Cum Meliolae species raro in Coniferis sint observatae, praesentem, etsi (causa ignota) ste-

rilem, tamen typicam, Auctor noluit praeterire.

42. Meliola Connari H. S. Yates, Philipp. Journ. Sc. Manila, XII (1917) 4384 p. 364 (M. Connariae). — Amphigena, maculas orbiculares vel irregulares 1-2 cm. latas atras velutinas formans, saepe confluentes et magnam partem folii occupantes; mycelio ex hyphis septatis brunneis radiantibus ramosis 8-11 μ latis composito; hyphopodiis capitatis alternantibus vel irregularibus, cellula superiore oblonga 15-20 μ longa, 18-22 μ lata, cellula basali 8-10 μ longa; hyphopodiis mucronatis paucis, alternantibus vel oppositis, ampulliformibus, usque ad 25-30 μ longis; setis mycelicis numerosis, saepe prope basim perithecii, erectis, rectis vel leviter curvatis, 600-700 μ longis, 12-15 μ latis, atris, opacis, simplicibus, acutis vel obtusis; peritheciis numerosis, globosis, atris, tuberculatis, 150-170 μ diam.; ascis oblongo-ovatis, 60-70 μ lengis, 35-40 μ latis, 2-4-sporis; sporidiis oblongis, utrinque late rotundatis, 4-septatis, ad septa constrictis, obscure brunneis, 50-55 μ longis, 20-25 μ latis.

Hab. in foliis Connari sp. (Connaraceae), Basiad, pr. Tayabas Luzon, Ins. Philipp.

43. Meliola Roureae Syd., Ann. Mycol., 15., 1917, p. 191.—Syn. M. Rou- 4385 reac H. S. Yates, Philipp. Journ. of. Sc. 13., 1918, p. 370. - Amphigena, plus minus effusa, mycelium rectangulariter ramosum ex hyphis obscure castaneo-brunneis flexnoso-torulosis septatis 7-9 \mu crassis compositum, hyphopodia sat numerosa alternantia irregularia, 20-26 u alta, cellula superiore 10-14 u lata, integra, angulata vel recurvata, subinde etiam leniter lobulata, cellula basali multo breviori, hyphopodia mucronata opposita vel unilateralia, plerumque e basi conoidea apicem versus sensim attenuata, 22-26 µ longa, basi 8-10 µ lata; setae myceliales numerosae simplices, rectiusculae usque subfalcatae, 600-900 µ longae, basi 10-12 µ latae biformes; aliae tota longitudine opacae, ad apicem acutae, aliae ad apicem non vel vix tenuiores, late rotundatae vel potius trucatae et plus minusve pellucidae; perithecia sparsa, globosa, 150-200 µ diam. glabra; asci 2-spori; sporae oblongo-cylindraceae, sordide fuscae, 4-septatae, vix vel leniter constrictae, utrinque rotundatae, 40-44 ¥ 16-19.

Hab. in foliis Roureae erectae (Connaraceae), Rizal, Luzon, Ins. Philipp. (M. RAMOS).

44. Meliola ipomoeicola Beeli, Bull. Jardin Bot. Etat Bruxelles v. 7., 4386 1920, p. 96. — Epiphylla; maculas irregulares atras parvas 0,5-1 mm. efformans; mycelio parce evoluto, hyphis leniter sinuosis brun-

neis 12-15 \* 6-8; hyphopodiis numerosis capitatis, alternis, raro suboppositis v. unilateralibus, cellula apicali subglobosa, 12 u diam. basilari bravissima v. nulla: hyphopodiis mucronatis oppositis: setis mycelicis numerosis sparsis brunneis septatis rectis et rigidis simplicibus apice acutis, 200-300 × 6-9; peritheciis verrucosulis. nigris astomis, 100.200 µ diam.; ascis non visis; sporidiis 4-sentatis, ad septa constrictulis, obtusis brunneis, 38-40 × 16.

Hab. epiphylla in foliis I pomoeae sp. (Convolvulaceae), Congo Africae trop. (VANDERYST). - M. Ipomoeae Earle (Syll. XVII p. 549) nec Rehm. Ascom. Exsice. fasc. 55., n. 2104 proxima, differt sporidiis majoribus, setis mycel, acutis, hyphopod, capitatis alternis numerosis, quandoque unicellularibus globulosis.

45. Meliola quadrifurcata Rehm, Ascomyc, Philipp, I in Philipp, Journ, 4387 of Sci., 8., (1913) p. 181. - Mycelio in maculis epiphyllis brunneolo-flavescentibus haud definitis plagulas velutinas plus minusve orbiculares, vix confluentes, 1,5-3 mm. latas, atras, medio incrassatas, arachnoideo-marginatas efformante; hyphis mycelii centrifugis, plerumque rectis, vix ramosis, fuscis, septatis, 6 µ cr., hyphopodia alternantia, capitata, 2-cellularia gerentibus, ca. 20 µ altis, cellula superiore subglobosa ca. 12 µ lata, hyphopodiis mucronatis haud conspicuis; peritheciis in centro mycelii aggregatis, versus basim verruculosis, atris, glabris, poro non pertusis, usque ad 250 u diam. juxta basim setis plurimis, erectis, nigro-fuscis, septatis, usque ad 150 μ alt. 9 μ cr., ad apicem in ramos 4, raro 2 vel 3, erectos, plerumque recurvos, obtusos, haud denticulatos, 80-120 > 5, septatos, dilute fuscidulos furcatis; ascis ellipticis, 2-4-sporis; sporidiis oblongis, utrinque rotundatis, 4-septatis, fuscis, 35-40 × 12-14.

Hab. ad folia I p o m o e a e (Convolvulaceae), Luzon, prov. Laguna. Los Baños, ins. Philipp. (C. F. BACKER). - Setis perithecii 4-furcatis praecipue distincta; M. furcatae Gaill. et M. patenti Syd. affinis.

46. Meliola Merremiae Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 4388 of Sci. VIII (1913) p. 253. - Mycelio epiphyllo plagulas orbiculares nigras vix radiantes 1-1,5 mm. latas formante, ex hyphis rectis, centrifugis, fuscis, septatis, 7-8 µ latis rectangulariter dichotomis, arcte juxtapositis; hyphopodiis plurimis, rectis, obtusis, 2-cellularibus, cellula inferiore perparvula, in longa serie propinque oppositis, fuscis, 10-12 + 6; hyphopodiis uncinatis oppositis, mucronatis, fuscis, 15 × 6; setis mycelialibus rectis, septatis, ad basim usque ad 10 µ latis, apice obtusis, fuscis; peritheciis sparsis,

globulosis, astomis, haud verruculosis, atris, ca. 120 µ diam.; ascis?; sporidiis oblongis, rectis, obtusis, 4-septatis, fuscis, 30-35 × 10-12.

Hab. in foliis Merremiae hastatae, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). - A M. praetervisa Gaill. differt sporidiis valde minoribus et setis obtusis; a M. malacotricha Speg. hyphopodiis alienis.

47. Meliola Hervittiae Rehm, Ascomyc. Philipp, II, in Philipp, Journ, 4389 of Sci. VIII (1913) p. 253. - Mycelio maculas orbiculares epiphyllas, 2-2,5 mm. latas, interdum confluentes, nigras, tenuissimas, margine subarachnoideas formante, ex hyphis sparse ramosis, 6-7 µ cr., fuscis, arcte aggregatis, breviter cellularibus; hyphopodiis capitatis numerosissimis, oppositis, oblongis, 2 cellularibus, breviter stipitatis, cellula superiore obtusa, 15 × 7; hyphopodiis mucronatis oppositis vel solitariis, ampulliformibus, pallidioribus, usque ad 17 × 6-10; set is mycelialibus sparsis, erectis, ca. 200 μ longis, ad basim 7 µ latis, apice acutatis, fuscis; peritheciis sparsis, globulosis, astomis, haud verrucosis, nigris, 130 µ circ. diam.; ascis 2vel 3-sporis; sporidiis cylindraceis, utrinque obtusis, rectis, 4-septatis non constrictis, dilute fuligineo-fuscis, 35-37 \* 14.

Hab. in foliis decoloratis Hervittiae sublobatae (Convolvulaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). - Species facile dignoscenda.

48. Meliola Alangii Syd., Ann. Mycol., 14., 1916, p. 355. - Amphigena, 4390 plagulas parum visibiles primo minutas 1-2 mm. diam. dein plus minus confluentes tenues arachnoideas formans; mycelio matrici arcte appresso repente, rectangulariter ramoso, ex hyphis 6-8 µ crassis fuscis septatis composito; hyphopodiis capitatis sat numerosis, alternantibus, totis 12-18 µ longis, cellula superiore globulosa vel saepius ovata integra 8-10 µ crassa, inferiore breviore; hyphopodiis mucronatis alternantibus vel oppositis, 18 24 μ longis, in collum longum productis; setis mycelii modice copiosis, rectis vel fere rectis, 300-600 μ longis, ad basim 78 μ crassis, sursum attenuatis, sed apicibus obtusis, tota longitudine opacis vel subinde ad apicem parum dilutioribus; peritheciis sparsis globosis, parum tuberculatis, 140-170 µ diam., in sieco collapsis; ascis fugacibus 2-3-sporis; sporidiis cylindraceis, 4-septatis, parum vel leniter constrictis, fumoso-brunneis, utrinque obtusis, 25-30 \* 9-11.

Hab. in foliis Alangii begoniaefolii (Cornaceae), Los Baños ins. Philippin. (C. F. BAKER).

49. Meliola Cucurbitacearum Stev., Mel. Porto Rico, in Ill. Biol. Mo- 4391

nogr. 1I, p. 526, fig. 51. — Coloniis epiphyllis, circularibus, 1-3 mm. diam., mycelio atro, reticulum sat compactum efformante, 7  $\mu$  crasso, ramis plerumque alternis; hyphopodiis capitatis alternis, haud crebris, uno pro cellula, cellulis 17-24  $\mu$  longis, cellula capitata ovoidea, lobata, 17  $\times$  14, basilari 7  $\mu$  longa; hyphopodiis mucronatis alternis vel oppositis, phialiformibus, 20  $\times$  5, rostro tenui, uncinato; setis perithecialibus nullis, mycelialibus in partibus coloniarum vetustis copiosis, 190  $\times$  9, ubique fuscis, apice simpliciter vel bis dichotomo-ramosis, rectangulariter dispositis, primariis 15-35  $\mu$ , secundariis subaequalibus, apice acutis; peritheciis 120  $\mu$  diam., scabris; ascis mox evanescentibus; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis, 41  $\times$  14.

Hab. in foliis caulibusque Cayaponiae? (Cucurbitaceae), El Alto de la Bandera, Porto Rico. — Dichotomia setarum et hyphopodiis lobatis perdistincta.

50. Meliola malacotricha Speg., Syll. IX, p. 425 — var. major Beeli, 43 Bull. Jard. Bot. Etat Bruxelles v. 7., 1920, p. 96. — A typo differt sporidiis longioribus, 44 × 16, setis mycel. etiam majoribus 350-400 × 8, hyphopodiis capitatis oppositis numerosissimis confertis.

Hab. in foliis Cucurbitaceae (?), Wombali Congo, Africa trop. (VANDERYST). — Var. longisporae Gaill. affinis et verisimiliter eadem, matrice tantum diversa.

51. Meliola confragosa Syd. in Leaflets of Philipp. Bot. V (1912) 43 p. 1536. — Mycelio plagulas minutas tantum epiphyllas, rotundatas vel irregulares, 0,5-2 mm. latas, atras, tenues efformante vel subinde totam folii superficiem plus minusve aequaliter obducente, ex hyphis laxiuscule ramosis, torulosis flexuosisque, fuscis, 6-9 μ cr. composito; hyphopodiis capitato-clavatis, alternis, saepe truncatis vel ad apicem irregularibus, 20-28 μ longis, superne 10-14 μ latis; setis nullis; peritheciis laxiuscule gregariis, globosis, atris, grosse tuberculatis (tuberculis valde prominulis), 100-175 μ diam., opacis: ascis late clavatis, bisporis, 38-50 × 14-22; sporidiis oblongis, 4-septatis, parum constrictis, utrinque rotundatis, 25-32 × 9-10, olivaceo-brunneis.

Hab. in foliis vivis Cucur bitaceae quaedam, Brooks Point, Palawan, ins. Philipp.

52. Meliola Mapaniae H. S. Yates, Philipp. Journ. Sc. Manila, XII 48 (1918) p. 367. — Amphigena, maculas atras, orbiculares, 1-5 mm-diam., saepe confluentes; mycelio ex hyphis brunneis septatis e peritheciis radiantibus 8-12 μ crassis composito; ramis oppositis; hy-

phopodiis capitatis numerosis, alternantibus, cellula superiore globosa vel subglobosa, 15-17  $\mu$  diam., cellula inferiore 10-14  $\mu$  longa; hyphopodiis mucrouatis numerosis plerumque alternantibus, ampulliformibus, usque ad 20-30  $\mu$  longis; setis mycelicis numerosis, erectis, rectis, atris, opacis, 500-800  $\mu$  longis, 15  $\mu$  crassis simplicibus, acutis; ascis non visis; sporidiis oblongis, 4-septatis, ad septa constrictis brunneis, utrinque late rotundatis, 52-56  $\mu$  longis, 22-26  $\mu$  latis.

Hab. in foliis Mapaniae sp. (Cyperaceae), Catubing River Samar, Ins. Philipp.

53. Meliola intricata Syd., Enum. Philipp. Fungi I, in Philipp. Journ. 4395 of Sci. VIII (1913) p. 268. — Amphigena vel culmicola, maculas circulares vel oblongas 2-8 cm. longas, sparsas vel confluentes, atras formans; mycelio ex hyhis densissime intertextis et rete fere continuum efformantibus, ramosis, septatis, fuscis, 7-11 μ latis composito; hyphopodiis capitatis numerosissimis, alternantibus, 18-26 μ longis, rectis vel curvatis, cellula superiore 10-14 μ crassa, rotundata vel parum lobato-incisa, inferiore 4 8 μ longa, 5-7 μ lata; setis mycelicis numerosis, rigidis, erectis vel basi abrupte genicu latis, atris, opacis, apice acutiusculis, 500-800 × 12-17; peritheciis paucis in quaque macula, globosis, 150-200 μ diam., atris, tuberculatis; ascis late ovatis, 2-4-sporis, mox evanescentibus; sporidiis oblongis, 4-septatis, leniter constrictis, utrinque obtusis, fuscis, 32-38 × 11-12.

92

193

94

Hab. in foliis culmisque Scirpi grossi (Cyperaceae), Luzon, Manila, ins. Philipp. (MERRILL). — Rete myceliali hyphopodiis abunde praedita et setis crassis praecipue distincta. — Var. major Beeli, Bull. Jard. Bot. Etat Bruxelles v. 7., 1920, p. 96.— A typo differt sporidiis majoribus  $42.46 \times 14.16$ , setis mycelicis angustioribus  $700.800 \times 6.10.$ —Hab. epiphylla in Monocotyledone a e sp., Kwilu, Congo Africae trop. (VANDERYST).

54. Meliola Hopeae H. S. Yates, The Philipp. Journ. of Sc., Bot. 13., 4396 1918, p. 369. — Hypophylla, maculas atras, 1-2 cm. diam. orbiculares formans; mycelio laxo radiante ex hyphis brunneis 5-7 μ latis septatis composito; ramis oppositis vel alternantibus; hyphopodiis capitatis numerosis, plerumque alternantibus, cellula superiore ovoidea, 10 μ diam., cellula inferiore 5 μ longa; hyphopodiis mucronatis numerosis, plerumque irregularibus, ampulliformibus, usque ad 15-25 μ longis; setis perithecii et mycelicis circa 6 ad basim perithecii positis, erectis, basi geniculatis 300-400 μ longis,

8  $\mu$  latis, septatis, apicis simplicibus, obtusis; peritheciis rotundatis, applanatis, atris, opacis, tuberculatis, 100-140  $\mu$  diam.; ascis evanescentibus 2-4-sporis; sporidiis oblongis, utrinque late rotundatis, 4-septatis, ad septa non constrictis, brunneis, 35-38 \* 12-14.

Hab. ad folia Hopeae sp. (Dipterocarpaceae), Mount Cadig Prov. Tayabas, Luzon, Ins. Philipp. (YATES).

55. Meliola Yatesiana Trotter n. nov. — Meliola Diospyri H. S. Yates, 4397 Philipp. Journ. of Sc. Manila, XII (1917) p. 364 nec Sydow 1911 (M. Diospyriae). — Amphigena, plerumque epiphylla, maculas atras, velutinas, orbiculares vel irregulares formans; mycelio abundante ex hyphis obscure brunneis 8 μ crassis composito; hyphis matrici adpressis; ramis oppositis vel irregularibus; hyphopodiis capitatis numerosis, oppositis, cellula superiore subglobosa, 12-15 μ lata, cellula inferiore 4-5 μ longa; hyphopodiis mucronatis paucis, ampulliformibus, usque ad 20 μ longis; setis mycelicis numerosis, erectis, rectis, vel leviter curvatis, 500-650 μ longis, 10 μ latis, atris, opacis, simplicibus, acutis; peritheciis paucis in quaque macula, globosis, atris, tuberculatis, 80-120 μ diam., ascis non visis; sporidiis cylindraceis, utrinque late rotundatis, 4-septatis, ad septa leviter constrictis, brunneis, 45-55 μ longis, 20-22 μ latis.

Hab. in foliis Diospyri discoloris (Ebenaceae), Basiad, Prov. Tayabas, Luzon Ins. Philipp.

56. Meliola Diospyri Syd. in Syd., et Butl., Ann. Mycol. IX, 1911, 4398 p. 381. — Amphigena; mycelio maculas orbiculares 3-5 mm. latas atras formante; hyphis fuscis, 5-8 μ cr., hyphopodia numerosa capitata opposita usque 17 μ longa gerentibus; setis mycelii rectis, rigidis, simplicibus, atro-brunneis, opacis, 350-700 μ long., 9-15 μ cr.; peritheciis globosis, 130-175 μ diam., in sicco collabescentibus; ascis 2-4 sporis; sporidiis 4-septatis, leniter constrictis, fuscis, utrinque rotundatis, 36-41 × 12-16.

Hab. in foliis Diospyri montanae (Ebenaceae), Sidrabunna, Koppa, Mysore Indiae or. (E. J. Butler).

57. Meliola Elaeocarpi H. S. Yates, Philipp. Journ. Sc. Manila, XII (1917) 4399 p. 365 (M. Elaeocarpeae).— Amphigena, plagulas atras, pelliculosas, orbiculares, 1-6 mm. diam., saepe confluentes efformans; mycelio ex hyphis ad basim perithecii centrifugis ramosis oppositis brunneis septatis 6-10 μ latis composito; hyphopodiis capitatis numerosis, oppositis, cellula superiore ovoidea, 10-12 μ diam., cellula basali 5-6 μ longa; hyphopodiis mucronatis paucis, irregularibus vel oppositis, ampulliformibus, 15-18 μ longis 6-8 μ latis; setis mycelicis

erectis, rectis vel ad basim geniculatis simplicibus, 300 u longis. 10-12 u latis, atris, opacis, apicem versus brunneis, acutis vel obtusis: peritheciis paucis in quaque macula, subglobosis, obscure brunneis tuberculatis, 100-120 µ diam., ascis evanescentibus: sporidiis 4-septatis, brunneis, ad septa constrictis, utrinque late rotundatis, 55 µ longis 22 µ latis.

Hab. in foliis Elaeocarpi (Elaeocarpaceae), Benguet Luzon, Ins. Philipp.

58. Meliola callosperma Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 4400 Cienc. Cordoba, t. 23., 1919, Extr. p. 89. - Maculis nullis: plagulis subicularibus saepius epiphyllis parvis orbicularibus 2-8 mm. diam, subcrustaceis glaberrimis atris, hyphis rectiusculis alterne ramosis, 8-10 µ cr., hyphopodiis subglobosis, 10-15 × 15, sessilibus donatis, apice circa perithecia praecipue ramulis sensim abbreviatis subclavulatis et fere hyphopodiiformibus praeditis; peritheciis depresse globosis, in sicco collabescentibus, glabris, astomis, 150-200 µ diam.; ascis elliptico-clavulatis, breviter pedicellatis, longe tenuiterque paraphysatis, 8-sporis, 100-120 \* 25-30; sporis elongato-subfusoideis, leniter clavulatis transverse 5-septatis, ad septum medium tantum constrictulis, levibus, roseo-fuligineis.

Hab. ad folia viva Gaylussaciae? sp. (Ericaceae), prope Apiahy, America austr. (J. PUIGGARI).

59. Meliola arecibensis Stev., Mel. Porto Rico, in III. Biol. Monogr. 4401 II, 1916, p. 491, fig. 18. — Coloniis hypophyllis, irregularibus, 1-3 mm. diam.; mycelio reticulum sat densum efformante ex hyphis 6 μ circ. diam., leniter sinuosis, opposite vel alterne ramosis constituto; hyphopodiis capitatis alternis in quaque cellula solitariis, cellulis 10.17 µ longis, cellula capitata ex ovoidea cuneata vel omnino irregulari, 20 \* 10, basilari brevi vel usque ad 20 μ longa; hyphopodiis mucronatis copiosis, plerumque oppositis, ampulliformibus, angustis, 20 µ longis; setis mycelialibus nullis; appendicibus perithecialibus paucis, 4-8, larviformibus, brevibus, circ. 85 \* 20, curvatis vel sinuosis, pellucidis, apice obscurioribus; peritheciis 200 μ diam., ob papillas rotundatas scabris, non ostiolatis; ascis mox evanidis; sporidiis 4-septatis, obscure brunneis, valde constrictis, obtusis, 44-51 × 20.

Hab. in foliis A calyphae bisetosae (Euphorbiaceae), Dos Bocas prope Utuado, Porto Rico. — M. Acalyphae appendicibus chitinosis et structura hyphopodiorum bene distincta.

60. Meliola Acalyphae Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 4402

of Sci. VIII (1913) p. 252. - Mycelio imprimis hypophyllo, plagulas sparsas, nigras, raro confluentes, orbiculares, 0,5-1,5 mm. latas formante, ex hyphis ad basim perithecii centrifugis, rectis, vix ramosis usque ad 10 µ latis, septatis, parvicellularibus, arcte agglutinatis, fuscis, apice dichotomis composito; hyphopodiis permultis, oblongis, obtusis, rectis, 2-cellularibus, oppositis, fere juxtappositis, 20 × 10; hyphopodiis uncinatis fuscis, oppositis, raris, usque ad 20 \* 10; setis nullis; peritheciis in medio mycelii paucis, sessilibus, globulosis, atris hand ostiolatis, ex cellulis magnis, convexule prominentibus contextis, circ. 150 µ diam.; ascis bisporis; sporidiis oblongis, obtusis, rectis, 4-sentatis, vix ad septa constrictis, fuscis, 30-35 \* 12-14.

Hab. in foliis Acalyphae stipulaceae (Euphorbiaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

61. Meliola luzonensis Syd., Ann. Mycol. 15., 1917, p. 188. - Amphigena, 4403 plerumque epiphylla, plagulas orbiculares vel irregulares 3-8 mm. diam. saepe confluentes formans; mycelium ex hyphis radiantibus rectangulariter ramosis obscure-brunneis 7-9 µ crassis septatis compositum; hyphopodia capitata numerosissima, plerumque perfecte opposita, cylindracea semper integra, 15.22 μ longa, 8.10 μ lata; hyphopodia mucronata non visa, setae mycelicae modice copiosae, 600-900 μ longae, basi 10-12 μ latae, apicem versus sensim attenuatae, semper acutae, tota longitudine opacae, atrae, simplices, rectae vel leniter curvatae; perithecia laxe aggregata, globosa, astoma 140-180 µ diam.; asci 2-3 spori; sporae oblongae, utrinque rotundatae, 4-septatae, leniter constrictae, fuscae 32-36 \* 12-15, loculis aequalibus.

Hab. in foliis Antidesmae spec. (Euphorbiaceae), prov. Bataan, Luzon, Ins. Philipp. (M. RAMOS). - Affinis M. oppositae sed hyphopodia cylindrica.

62. Meliola Colliguajae Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4404 Buenos Aires XXIII p. 40 (1912). - Caespitulis epiphyllis, subdiscoideis, 2-8 mm. diam., non raro confluendo difformibus, pro parte setulosis, tenuissime fibrilloso-araneosis et siccando plus minusve deciduis; hyphis confertiusculis, intertextis, alterne ramosis, subflexuosis 8-9 \( \mu \) cr., hyphopodiis alternis arcte antrorsum adpressis, rarissime ampulliformibus et oppositis plus minusve laxe ornatis; setulis praecipue circa perithecia evolutis, erectis, 100-400 × 8-10, leniter flexuosis, atris; peritheciis subglobosis 150-250 µ diam., in sicco collabescentibus, atris, glabris, subcarbonaceis, parce papil-

losis, astomis, contextu opaco indistincto; ascis non visis; sporidiis cylindraceis, utrinque obtusissime rotundatis, quadriseptatis, ad septa leniter constrictis, 38-45 × 14-18, obscure fuligineis, loculis emnibus subaequalibus.

Hab. in foliis vivis Colliguajae brasiliensis (Euphorbiaceae), in silvis prope Puerto Leon, Misiones: Argentina.

63. Meliola gymnanthicola Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 1916, p. 517. — Coloniis epiphyllis, circularibus, 2-4 mm. diam.; mycelio reticulum densum efformante, hyphis 7  $\mu$  cr. ramis plerumque oppositis saepeque rectangulariter insertis; hyphopodiis capitatis alternis, haud crebris, in quaque cellula singulis, cellulis 20  $\mu$  circ. longis, cellula capitata ovoidea vel subcylindrica,  $17 \times 10$ , basilari 2-3  $\mu$  longa; hyphopodiis mucronatis alternis vel oppositis e conoideis ampulliformibus, irregularibus,  $16\cdot18 \times 7$ ; setis perithecialibus, nullis, mycelialibus sparsis, leniter undulatis,  $300 \times 7$ , apice obtusis, atris; peritheciis 190  $\mu$  diam., scabriusculis; ascis mox evanidis; sporidiis 4 septatis, brunneis, lenissime constrictis, obtusis,  $37 \times 17$ .

Hab. in foliis G y m n a n t h i s l u c i d a e (Euphorbiaceae), Gua-yanilla, Porto Rico.

64. Meliola Heveae Vincens in Bull. Soc. Path. végét. Fr. II (1915) 4406 p. 26, c. ic. — Maculis vage circularibus, 2 mm. circ. diam., e mycelio repente, arcte adnato, radiante, fusco constitutis; hyphis copiose dichotomice ramosis, 7-9 μ cr., crebre septatis, ad septa constrictis, propagulis (hyphopodiis) 1-2-pluricellularibus ornatis; peritheciis atris, sphaeroideis, 250 μ diam.; setis rigidis, brunneis, basi dilatatis, apice plus minusve angustatis, 55-60 × 9-12, ornatis; ascis ellipsoideis, bisporis, 60-70 × 40-50; sporidiis cylindraceo-ellipsoideis, utrinque obtusis, 4-septatis, ad septa constrictulis, fuscis, 45-50 × 16-18.

Hab. in foliis Heveae sp. (Euphorbiaceae), in America tropicali.

65. Meliola Ramosii H. et P. Sydow, Ann. Mycol. XII, 1914, p. 552.— 4407 Epiphylla, plus minus effusa, maculas atras parum conspicuas subarachnoideas 1-3 mm. latas v. confluendo majores et irregulares formans; mycelio modice evoluto, ex hyphis ramosis anastomosantibusque fusco-brunneis 6-7,5 μ crassis composito; hyphopodiis capitatis alternantibus, modice copiosis, cellula basali brevi v. brevissima, superiore late rotundata subglobosa, obscure brunneis, totis 16-22 × 11-15; hyphopodiis mucronatis ampulliformibus, op-

positis, 18-22 µ long.; setis mycelicis numerosis, basi saepe abrupte geniculatis, circa perithecia oriundis, erectis, rectis, simplicibus. 2-5-septatis, fusco-brunneis, apice late rotundatis, 120-200 × 7-8. peritheciis sparsis, globulosis, in sieco profunde collapsis, 140-175 u diam., parum tuberculatis, ostiolatis; ascis subglobosis v. ovatis. 2-4 sporis, 32-42 × 25-32; sporidiis oblongis, utrinque late rotundatis, 4-septatis, leniter constrictis, brunneis, 26-32 \* 12-14.

Hab, in foliis Homonoiae ripariae (Euphorbiaceae), Antipolo prov. Rizal Luzon, Ins. Philippin. (M. RAMOS).

66. Meliola Jatrophae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4408 1916, p. 516. - Coloniis epiphyllis, circularibus vel irregularibus, 1-4 mm. diam.; mycelio ex hyphis 7 μ crassis, ramis plerumque oppositis, laxe reticulato-contextis efformato; hyphopodiis capitatis alternis vel irregulariter dispositis, angulo acuto insertis, 27 µ circ. inter se distantibus, cellula capitata ovoidea, 17 × 7, apice obtusa, basilari brevi; hyphopodiis mucronatis copiosis et in ramis nonnullis dense confertis, oppositis, ampulliformibus; setis perithecialibus nullis, mycelialibus paucis, basi peritheciorum excepta ubi numerosae adsunt, curvis, 250 µ circ. longis, fuscis, apice acutis; peritheciis 130·150 μ diam., scabriusculis; ascis mox evanidis; sporidiis cylindraceis, 4-septatis, brunneis, leniter constrictis, obtusis, brevibus, crassis, 30 × 17.

Hab. in foliis Jatrophae hernandifoliae (Euphorbiaceae), Rio Tanama et Dos Bocas, Porto Rico. - Crassitie sporidiorum structura et insertione hyphopodiorum praecipue distincta.

67. Meliola Macarangae Syd., Ann. Mycol., 15., 1917, p. 188. - ? Syn. M. 4409 Macarangae H. S. Yates, Philipp. Journ. of Sc. 12., 1917, p. 367.— Hypophylla vel caulicola, rarius etiam epiphylla, plagulas orbiculares 3-10 mm. latas velutinas aterrimas, crassiusculas formans: mycelium ex hyphis densissime ramosis et intertextis 8-9 μ crassis castaneo brunneis compositum, ramulis plerumque brevibus; hyphopodia capitata sat numerosa irregularia, 22-28 µ longa, cellula superiore 15-18 \mu lata angulata vel parum lobata, cellula inferiore mox brevi mox longiore; setae mycelii copiosissimae, rectae vel parum subinde flexuosae, atrae, opacae, sublanceolatae, ad apicem acutatae, 180-350 µ longae, basi 9-12 µ latae; perithecia copiose aggregata, globosa, 170-200 μ diam., glabra; asci 2-rarius 3-spori; sporae oblongae 4-septatae, vix vel leniter constrictae utrinque rotundatae, in maturitate obscure castaneo-brunneae, 40-52 × 12-22, cellulis duabus extimis minoribus.

Hab. in foliis Macarangae Tanarii et M. bicoloris (Euphorbiaceae), San Antonio, Laguna, Luzon Ins. Philipp. (M. RAMOS et R. C. Mc Gregor).

68. Meliola apayacensis H. S. Yates, The Philipp. Journ. of Sc., Bot., 4410 13., 1918, p. 364. — Amphigena, plerumque epiphylla, plagulas atras, velutinas, orbiculares, 3-8 mm. diam. efformans; mycelio ex hyphis radiantibus brunneis septatis 6-7 μ latis composito, articulis 25-35 μ longis; hyphopodiis capitatis numerosis, alternantibus, vel unilateralibus, bicellularibus, cellula superiore ovata vel lobata 15-18 μ diam., cellula inferiore 6-10 μ longa; hyphopodiis mucronatis non visis; setis mycelicis numerosissimis, erectis, rectis vel leviter curvatis, atris, opacis, versus apicem brunneis, acutis, 200-280 μ longis, 10-12 μ cr.; peritheciis paucis, globosis, tuberculatis, atris, opacis, 175-200 μ diam.; ascis bisporis, 50-60 ≈ 20-30; sporidiis 4-septatis, ad septa leviter constrictis, subcylindraceis, utrinque rotundatis, brunneis 50-58 μ longis, 13-16 μ latis.

Hab. in foliis Macarangae Tanarii (Euphorbiaceae), Subprov. Apayao, Luzon, Ins. Philipp. (FELIX).

69. Meliola subapoda H. et P. Sydow, Ann. Mycol. XII, 1914, p. 547.— 441: Hypophylla, plagulas orbiculares ¹/₂-1 cm. diam. tenues formans; mycelio ex hyphis longis rectis v. flexuosis 5-7 μ cr. remote septatis (articulis 30-50 μ long.) fuscis non v. parce ramosis composito; hyphopodiis capitatis rarissimis v. fere nullis, continuis, 16-20 × 8-10, integris v. irregularibus; setis nullis; peritheciis laxe gregariis v. sparsis, globulosis, grosse verrucosis, 140-190 μ diam.; ascis ovatis, 2-3-sporis; sporidiis ellipsoideis, utrinque attenuatis, 4-septatis, constrictis, obscure castaneo-brunneis, 36-39 × 13-15, loculis mediis majoribus.

Hab. in foliis Malloti philippin ensis (Euphorbiaceae), Angat prov. Bulacan Ins. Philippin. (M. Ramos).

70. Meliola sauropicola H. S. Yates, Philippin. Journ. Sc. Manila, XII 441 (1917) p. 368. — Epiphylla, rariter caulicola, maculas dispersas, atras, orbiculares, 2-4 mm. diam., saepe confluentes; mycelio -x hyphis ad basim perithecii centrifugis rectis septatis ramosis 6-8 μ latis composito; hyphopodiis capitatis-numerosis, alternantibus vel irregularibus, bicellularibus, cellula superiore 15-20 × 10-12, inferiore 8-10 μ longa; hyphopodiis mucronatis numerosis, alternantibus vel irregularibus, ampulliformibus, usque ad 20 μ longis; setis mycelicis erectis, rectis vel leviter curvatis, 500-650 × 12-15, inferne opacis, atris, apicem versus obscure brunneis, obtusis, simplicibus;

peritheciis rotundatis, applanatis, 110-160  $\mu$  diam., contextu ex cellulis plus minus radiantibus 6-8  $\mu$  diam. composito, in sieco collapsis; ascis evanescentibus, circiter 2-4-sporis: sporidiis cylindraceis, utrinque rotundatis 4 septatis, ad septa leviter constrictis, fuscis, 42-45  $\times$  15-17.

Hab. in foliis Sauropi sp. (Euphorbiaceae), Catubing River, Ins. Philipp. (Ramos).

71. **Meliola pteridicola** Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4413 II, 1916, p. 396, fig. 27. — Coloniis amphigenis, plerumque vero epiphyllis, 1-6 mm. diam.; mycelio laxe reticulato, ex hyphis subrectis, saturate fuscis, obscure septatis, subparallelis, ramosis constituto; hyphopodiis capitatis alternis vel irregularibus, non crebris, 30 μ circ. inter se distantibus, ovoideis vel piriformibus, 17 \* 3, apice incrassatis, cellula basilari brevissima; hyphopodiis mucronatis paucis et sparsis vel in ramis quibusdam copiosis, alternis vel oppositis, tenuibus, phialiformibus, 16-18 \* 7, rostro augusto; setis mycelialibus nullis, perithecialibus paucis, 3-10, fuscis, rectis vel apice leniter incurvis, 90 \* 7; peritheciis 170 μ diam., ob papillulas rotundatas 6-10 μ prominentibus scabris, non ostiolatis; ascis mox evanidis; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis, 35-40 \* 4.

Hab. copiosa in foliis petiolisque Aneimiae et Adianti spec. plur. (Filices), Porto Rico. — Ob hyphas subparallele decurrentes praecipue distincta.

72. Meliola Paulliniae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4414 1916, p. 513. — Coloniis atris, setosis, circularibus, epiphyllis, 3-8 mm. diam.; mycelio ex hyphis rectis, opposite ramosis, 8 μ cr., radiatis, laxe reticulato-contextis efformato; hyphopodiis capitatis alternis, saepe rectangulariter insertis, haud crebris, singulis in quaque cellula, cellulis 34 μ circ. longis, cellula capitata ovoidea 17 × 14, basilari brevi, hyphopodiis mucronatis saepius oppositis, phialiformibus, rostro tenuiusculo; setis perithecialibus nullis, mycelialibus copiosis, rectis, simplicibus, ubique atris, rigidis, abrupte acutatis, 275-500 × 8-9; peritheciis 150-160 μ diam.; ascis evanescentibus; sporidiis 37-40 × 14-15, 4-septatis, constrictis, obtusis.

Hab. in foliis Caseariae (Flacourtiaceae), Mammeae (Guttiferae), Paulliniae (Sapindaceae), Porto Rico. — Specimina in Casearia et in Mammea interdum a typo paullo recedunt. Species M. polytrichae affinis.

73. Meliola Tonduzi Spegaz., Fungi Costaric. nonn., in Bol. Ac. Nac. 4415

Cienc. Cordoba, t. 23., 1919, Extr. p. 190. — Amphigena; plagulae orbiculares parvae 3-5 mm. diam. v. confluendo magnae 8-15 mm. ac difformes, aterrimae; hyphae repentes rectiusculae oppositae ramosae, 7-10  $\mu$  cr., hyphopodiis saepius oppositis obovatis, 20-25  $\times$  12-15, nonnullis ampulluliformibus intermixtis, laevibus, setulis parum numerosis erectis rectis opacis rigidulis apice subobtusiusculis praeditae; perithecia disco hypocarpico destituta, globosa glabra subpapillulosa, non collabescentia, astoma nigerrima opaca 120-150  $\mu$  diam.; asci elliptici 2-4-spori, 80-120  $\times$  40; sporae cylindraceo-subfusoideae, saepius leniter naviculares, utrinque acutiusculae, 3-septatae, ad septa non v. vix constrictae, obscure fuligineae, 40-55  $\times$  20-24.

Hab. in foliis vivis Xylosmatis Salzmanni (Flacourtiaceae), prope Carthago Costarica, America trop.

74. Meliola rigida Doidge, Trans. R. Soc. South Afr. V, 1917, p. 736 4416 et 747, t. 64 fig. 36. — Amphigena, maculas atras usque ad 1 cm. diam. efficiens; hyphis rigidis, 7-8 μ crassis, brunneis, cellulis 18-25 μ longis, ramis plerumque oppositis; hyphopodiis capitatis numerosis, oppositis breviter stipitatis 14-18 μ long., cellula superiore ovata globulosa, 10-12 × 8-10; hyphopodiis mucronatis non numerosis, pallidioribus, oppositis circa 18 μ long., setis mycelicis erectis, simplicibus, plus minusve sinuosis, atris, opacis, 250-600 × 10-11; peritheciis sparsis, atris, globulosis, verrucosis, 180-220 μ diam.; ascis ovatis, breviter stipitatis, 3-sporis; sporidiis 4-septatis, leniter constrictis, oblongis, compressis, utrinque rotundatis, 40-45 × 18-20.

Hab. in foliis Xymalos monosporae (Flacourtiaceae), Woodbush, Zoutpansberg Dist., Africa austr. (E. M. Doldge).

75. Meliola Othophorae H. S. Yates, F. from Brit. N. Borneo, in Philipp. Journ. of Sc. Bot., v. 13., 1918, p. 235. — Maculis epiphyllis, atris, orbicularibus vel suborbicularibus, 2-5 mm. diam.; mycelio copioso, ex hyphis rectis vel tortuosis brunneis 7-8 μ crassis, ramosis composito; ramis plerumque alternantibus; hyphopodiis capitatis numerosis, cellula superiore oblonga vel subinde lobata, 10-12 × 6-10, cellula inferiore 5-6 μ longa; hyphopodiis mucronatis paucissimis, ampulliformibus, usque ad 15 μ longis, setis mycelicis erectis, rectis, obscure brunneis, 350-450 × 7-8 cr. acutis; peritheciis numerosis, globosis, atri, opacis, 150-200 μ diametro; ascis ovoideis, 30-35 × 18-20, bisporis; sporidiis 4-septatis, ad septa constrictis, cylindraceis, utrinque obtusis, brunneis, 30-32 × 8-12.

Hab. in foliis Othophorae fruticosae (Gentianaceae), Sapong, in ins. Borneo bor.

76. Meliola Gesneriae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4418 1916, p. 515. — Coloniis hypophyllis, circularibus, 2-8  $\mu$  diam.; mycelio atro, dense reticulato, 7  $\mu$  diam., ramis plerumque oppositis; hyphopodiis capitatis alternis, haud crebris, uno pro cellula, cellulis 24  $\mu$  circ. longis, cellula capitata ovato-globosa, 10  $\times$  14, basilari 4-7  $\mu$  longa; hyphopodiis mucronatis alternis vel oppositis, phialiformibus; setis perithecialibus nullis, mycelialibus rectis vel leniter curvis, 400  $\times$  7, ubique fuscis, circa perithecia copiosioribus, apice acutis; peritheciis 110  $\mu$  diam., levibus; ascis cito diffluentibus; sporidiis 4-septatis, brunneis, lenissime constrictis, 41  $\times$  17.

Hab. in foliis Gesneriae albiflorae (Gesneriaceae) et Cestri sp. (Solanaceae), Porto Rico.

77. Meliola Scevolae H. et P. Sydow, Ann. Mycol. XII, 1914, p. 551.— 4419
Hypophylla, plagulas minutas orbiculares 2-4 mm. latas tenues for mans; mycelio radiante, ex hyphis omnino rectis fuligineis crassiuscule tunicatis 5-7 μ cr. composito; hyphopodiis alternantibus, 12-16 μ long., cellula superiore globosa v subglobosa et 10 μ diam., inferiore minuta saepe brevissima; hyphopodiis mucronatis oppositis, ampulliformibus, usque 22 μ long.; setis mycelicis parcis, rectis, fuligineis, tota longitudine pellucidis, crassiuscule tunicatis, remote septatis, apice obtusis, 250-375 × 5-74, peritheciis parcis, globosis, grosse verrucosis, atris, 120-150 μ diam.; ascis ovatis, bisporis; sporidiis cylindraceis, utrinque obtusis, 4-septatis, parum constrictis, fuligineis, 35-38 × 13-15.

Hab. in foliis Scaevolae frutescentis (Goodeniaceae), Bales prov. Tayabas Luzon, Ins. Philippin. (L. ESCRITOR).

78. Meliola heterotricha Syd. in Leaflets of Philipp. Bot. VI (1913), 4420 p. 1923. — Mycelio hypophyllo, maculiformi, plagulas atras valde conspicuas, 1-3 cm. diam. efformante, ex hyphis ramosis anastomosantibus, saepe longitudinaliter connatis, atro-brunneis, opacis, 6-8 μ latis composito; hyphopodiis mucronatis paucis, oppositis vel alternis, 18-26 μ longis; hyphopodiis capitatis numerosis, alternantibus, bicellularibus, rectis vel curvatis, 18-22 × 7-9, cellula basali brevi; setis mycelicis numerosis, erectis, rectis, rigidis, opacis, 200-375 × 6-8, septatis, biformibus: aliis simplicibus, apice obtusis, aliis apice 2-3-furcatis, dentibus mox exiguis mox elongatis et 8-12 μ longis; peritheciis aequaliter distributis, globosis, 160-200 μ diam., rugulosis; ascis ovatis, bisporis, fugacibus; spo

ridiis oblongis, utrinque obtusis, 4-septatis, ad septa constrictis, fuscis,  $36\text{-}44 \times 10\text{-}12$ .

Hab. in foliis Donacis cannaeformis (Graminaceae), Cabadbaran, Mindanao, ins. Philipp. — Ob setas difformes M. Mangiferae Earle proxima, sed setis minoribus, hyphis angustioribus et sporidiis angustioribus et constrictis diversa.

79. Meliola Imperatae Syd., Ann. Mycol. 15., 1917, p. 186. - Amphi- 4421 gena, plagulas minutas elongatas 2.5 mm. longas atras formans; mycelium ex hyphis rectangulariter denseque ramosis obscure brunneis 6.9 µ crassis septatis flexuoso-undulatis vel rectiusculis compositum; hyphopodia capitata copiosa, alternantia, tota 22-25 µ longa, cellula basali cylindracea brevi vel longiore 5-10 u longa, cellula superiore ovata aut saepius leniter angulata vel parum lobata 14·17 μ lata; hyphopodia altera (vix mucronata dicenda) opposita vel solitaria, rara continua, cylindracea, obtusa, 12-15 μ longa, 7.9 µ lata; setae mycelicae haud numerosae, rectae, 250-400 µ longae, 9-11 µ crassae, tota longitudine atrae opacae, ad apicem dentibus irregularibus plus minus erectis 2-6 sive brevibus sive longioribus (tunc usque 15 µ longis) plerumque obtusis praeditae; perithecia sparsa vel laxe gregaria, 150-180 µ diam.; asci 2-3-spori, diffluentes; sporae cylindraceae, utrinque rotundatae, 4-septatae, leniter constrictae, fuscae, 35:42 \* 12-14.

Hab. in foliis Imperatae cylindricae (Graminaceae), Rizal et San Antonio, Luzon Ins. Philipp. (M. RAMOS).

80. Meliola panicicola H. et P. Sydow, Ann. Mycol. XII, 1914, p. 552.— 4422 Amphigena, plagulas minutas v. mediocres plus minus determinatas tenues formans; mycelio radiante, ex hyphis fuscis ramosis, 5-7 μ crassis composito; hyphopodiis capitatis numerosis, alternantibus, 17-22 × 10-13, loculo superiore angulato globuloso v. truncato sed haud lobato; hyphopodiis mucronatis rarioribus, oppositis; setis mycelicis numerosis, rectis, rigidis, apice obtusis, superne pellucidis, inferne minus pellucidis v. opacis, remote septatis, crasse tunicatis, 400-550 μ long. 9-12 μ latis; peritheciis sparsis, globosis verrucosis, astomis, 110 150 μ diam.; ascis ovatis, bisporis; sporidiis cylindraceis, utrinque late rotundatis, griseo-fuscis, 4-septatis, non v. parum constrictis, 30-35 × 11-13.

Hab. in foliis Panici palmaefolii (Graminaceae), Mt. Isaroy Camarines, Ins. Philippin. (M. Ramos).

81. Meliola substenospora v. Höhn. — Syll. XXII p. 56. — fm. Rott- 4423 boelliae Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany,

VI (1914) p. 2193. - Absque diagnosi.

Hab. ad folia Rottboelliae exaltatae (Graminaceae). Los Baños, ins. Philipp. (S. A. REYES et M. B. RAIMUNDO).

82. Meliola Sacchari H. et P. Sydow, Ann. Mycol. XII, 1914, p. 548, 4424 Plagulas atras minutas 1-3 mm. longas saepe confluendo majores et subinde totam folii superficiem obtegentes formans; mycelio dense contexto ex hyphis crebre ramosis anastomosantibus obscure fuscis 8-10 µ cr.; hyphopodiis capitatis alternantibus sat numerosis, clavato-capitatis, 18-22 µ long., cellula basali brevi, superiore rotundata 13-15 µ lata; hyphopodiis mucronatis copiosis, oppositis, usque 18 µ long.; setis mycelicis erectis, rectis, 175-400 × 9-12, atris, opacis, ad apicem irregulariter in ramos 2-6 (saepius 4) plerumque brevissimos usque 10 µ tantum longos erectos rarius elongatos et tunc usque 30 µ longos divisis; ramulis iterum irregulariter denticulato-vel digitiformiter divisis; peritheciis sparsis, globosis, atris, 150-200 \( \mu\) diam., ex cellulis 10-12 \( \mu\) diam. contextis; ascis ovatis, plerumque 2-sporis, fugacibus; sporis 4-septatis, oblongis, utrinque late rotundatis, fuscis, 40-48 × 14-18, leniter constrictis, cellulis aequalibus.

Hab. in foliis Sacchari spontanei (Graminaceae), Ifugao, Luzon, Ins. Philippin. (R. C. Mc GREGOR), Imperatae cylindricae, Mt. Maquiling prov. Laguna, Luzon (E. D. MERRILL).

83. Meliola Stenotaphri Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4425 1916, p. 509, fig. 38. - Mycelio sinuoso vel zig-zag-undulato; hyphopodiis capitatis alternis, hine inde unilateralibus, distincte pedicellatis, e cellula basilari 5-9 × 7, capitata, sphaerica vel ovata, circ. 20 > 14; hyphopodiis mucronatis paucis, oppositis vel alternis, ampulliformibus, 14 × 7; setis mycelialibus atris, opacis, 275 μ longis, basi 7 µ cr., apice simplicibus et acutis, rarissime bifidis; setis perithecialibus nullis; peritheciis minutis, 100 µ circ. diam., ob papillulas rotundatas scabris; sporidiis oblongis, 4-septatis, obtusis, leniter constrictis, 30-44 \* 10-14.

Hab. in foliis Stenotaphri secundati (Graminaceae), ·Porto Rico. — Characteribus mycelii et hyphopodiorum facile dignoscenda.

84. Meliola Calophylli Stev., Mel. Porto Rico, in III. Biol. Monogr. II, 4426 1916, p. 490. - Coloniis utplurimum epiphyllis, irregularibus, diffusis, 1-10 mm. diam.; mycelio ex hyphis irregulariter ramosis, 7 μ diam., laxe reticulato-contextis constituto; hyphopodiis capitatis alternis vel irregularibus, non crebris, 35 µ circ. inter se di-

stantibus, cellula capitata ovoidea vel pyriformi, saepe angulosa et irregulari,  $24 \times 17$ , basilari  $14~\mu$  vel minus longa; hyphopodiis mucronatis irregulariter distributis, ampulliformibus, angustis,  $20~\mu$  circ. longis; setis mycelialibus nullis, perithecialibus copiosissimis, larviformibus, curvis, apice obtusis, pellucidis,  $51 \times 17$ ; peritheciis  $220~\mu$  diam., regione ostiolari minuta; aseis mox evanidis; sporidiis 4-septatis, brunneis, valde constrictis, obtusis,  $44.47 \times 17$ .

Hab. in foliis Calophylli Calabae (Guttiferae), Mayaguez, Porto Rico. — Species appendicibus copiosissime larvaeformibus, transverse striatis et simulate septatis facile dignoscenda.

85. Meliola Clusiae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4427 1916, p. 520. — Coloniis hypophyllis, irregularibus, diffusis, 3-5 mm. diam., mycelio brunneo, 8 μ cr., subrecto, ramis utplurimum oppositis; hyphopodiis capitatis alternis, uno pro cellula, cellulis 30 μ circ. longis, cellula capitata ovoidea vel ellipsoidea, rarius cylindrica vel irregulari, 20 × 14, basilari 2-4 μ longa; hyphopodiis mucronatis sparsis, 20 × 7, phialiformibus; setis perithecialibus nullis, mycelialibus paucis, 800 × 10, ad basim, apice obtuso, fragili, saepius rupto, circa perithecia confertis; peritheciis simulate dimidiatis, areola hypharum radiantium tectis; sporidiis 4-septatis arcte constrictis, obtusis, cylindraceis. 61 × 20.

Hab. in foliis Clusiae minoris (Guttiferae), El Alto de la Bandera, Porto Rico.

86. Meliola mangostona Sacc., Notae Mycol. XXIV p. 4 (Bull. Orto bot. 4428 Nap., 1918). — Coloniis epiphyllis, irregularibus, nigricantibus, saepe late confluentibus tenuiter velutinis; subiculi hyphis eximie reticulatis, brunneis; hyphopodiis ovato-oblongis apice rotundatis, bicellularibus,  $20 \times 9$ , rarius mucronatis  $22 \times 6.7$ ; setis nullis visis; peritheciis globosis, prominulis,  $180~\mu$  diam. sublevibus, nigris; ascis ellipsoideo-oblongis, 4-sporis; sporidiis tereti-oblongis, utrinque rotundatis, constricto-4-septatis,  $45.46 \times 12.14$ , brunneis.

Hab. in foliis Garciniae mangostanae (Guttiferae), in Horto bot. Singapore (BAKER).— Species in foliis Garciniae Kydiae (ibidem) coloniis saturate nigricantibus, crebrioribus, amphigenis 4-5 mm. latis, setigeris est diversa species, pulcherrime denseque reticulata sed exemplaria nimis vetusta indeterminanda (Mel. Kydia ad interim).

87. Meliola Garciniae H. S. Yates, The Philipp. Journ. of Sc. Bot., 4429 13., 1918, p. 369. — Maculas plerumque epiphyllas irregulares, 5-10 mm. diam. vel confluentes, atras, crustaceas efformans; mycelio

ex hyphis castaneis 8-10  $\mu$  crassis formato; ramis plerumque oppositis; hyphopodiis capitatis numerosis, plerumque alternantibus, cellula superiore subglobosa vel ovata, 12-14  $\times$  11-12, cellula inferiore 8-10  $\mu$  longa; hyphopodiis mucronatis numerosis, alternantibus vel oppositis, ampulliformibus, usque ad 25-30  $\mu$  longis; setis mycelicis numerosis, rectis, erectis, 11-13  $\mu$  crassis 700-1000  $\mu$  longis, atris, opacis, acutis vel obtusis; peritheciis paucis, globosis, atris, opacis 200-300  $\mu$  diam.; ascis non visis; sporidiis castaneis, cylindraceis, utrinque rotundatis, 4-septatis, ad septa vix constrictis, 50-55  $\times$  18-20.

Hab. ad folia Garciniae sp. (Guttiferae), Burgos Prov. Llocos Norte, Luzon, Ins. Philipp. (RAMOS).

88. Meliola torta Doidge, Trans. R. Soc. South. Afr. V, 1917, p. 726 4430 et 744, t. 60 f. 16. — Amphigena, maculas atras tenues, 5-10 mm. diam. efficiens; hyphis tenuibus, 6-7 μ crassis, tortuosis, anastomosantibus, cellulis 25-36 μ long.; ramis irregularibus plerumque unilateralibus; hyphopodiis capitatis tenuibus, cellula superiore 14-25 × 14-20, diverse lobata, torta, apice obtusa v. convexa; hyphopodiis mucronatis, ampullaceis, 20-36 μ l ng.; setis mycelicis non numerosis, sparsis rectis, simplicibus, basi 10-11 μ cr., apice acutis; peritheciis paucis, sparsis, atris, globulosis, rugulosis, 160-250 μ diam.; ascis numerosis, 8-sporis; sporidiis distichis v. conglobatis, 3-septatis ad septa vix constrictis, clavatis, 25-30 × 7-11.

Hab. in foliis Trichocladi criniti (Hamamelidaceae), Izeleni, Kingwilliamstown, Africa austr.

89. Meliola Reinkingii Sydow, Ann. Mycol. 18., 1920, p. 98. — Pla- 4431 gulae amphigenae, orbiculares, 2-4 mm. diam., subvelutinae, aterrimae; mycelium ex hyphis longis castaneo-brunneis 4-6 μ crassis subrectis vel parum undulatis copiose rectangulariter ramosis anastomosantibusque septatis compositum; hyphopodia capitata satis numerosa, alternantia, 20-25 μ longa, cellula inferiore longiuscula, superiore plerumque plus minus lobata rarius integra 8-12 μ lata; hyphopodia mucronata rariora; setae mycelicae modice copiosae, rectae, simplices, 250-300 μ longae, basi 6-10 μ crassae, tota longitudine opacae, ad apicem acutae; perithecia laxe gregaria, 100-120 μ diam., in sicco collapsa; asci fugaces; sporae cylindraceae, 3-septatae, obscure castaneo brunneae, constrictae, utrinque obtusae, 38-48 × 13-16.

Hab. in foliis Hippocrateaeae, Maria Cristina Falls, Lamao, Ins. Philippin. (O. H. REINKING).

90. Meliola cavitensis H. S. Yates, The Philipp. Journ. of Sc., Bot., 4432 13., 1918, p. 366. — Epiphylla, plagulas orbiculares vel irregulares, 2 ad 6 mm. diam. tenues efformans; mycelio ex hyphis longis, rectis vel flexuosis 6-7 µ crassis septatis brunneis ramosis composito; articulis 20-25 µ longis; hyphopodiis capitatis numerosis, plerumque alternantibus, cellula superiore subglobosa vel ovata, 12 µ diam., cellula inferiore 5-6 µ longa; hyphopodiis mucronatis numerosis, oppositis vel alternantibus, ampulliformibus, usque ad 25 μ longis; setis mycelicis pancis, rectis vel curvatis, septatis, obscure brunneis, obtusis 300-400 μ longis, 8-10 μ latis; peritheciis nume rosis, globosis, obscure brunneis, subopacis, 85-100 µ diam.; ascis clavatis, 35 µ longis, 8-10 µ latis, circiter 6-8-sporis; sporidiis cylindraceis, utrinque rotundatis, 4-septatis, ad septa constrictis, brunneis 30-35 \* 10-12.

Hab. ad folia Colei sp. (Labiatae), Talisay ridge, Prov. Cavite,

Luzon, Ins. Philipp. (MERRILL).

91. Meliola hyptidicola Stev., Meliol Porto Rico in Illin. Biolog. Mo. 4433 nogr. II, 1916 p. 484, fig. 8. - Coloniis amphigenis, praecipue hypophyllis, irregularibus, diffusis; mycelio atro, reticulum laxum efformante, 7 p diam., ramis irregularibus; hyphopodiis capitatis minutis, alternis vel irregulariter dispositis, non crebris, uno pro cellula, cellulis 20 μ circ. longis; cellula capitata ovoidali 14-17 \* 9, basali 3-6 µ longa; hyphopodiis mucronatis paucis, ampulliformibus; setis mycelialibus et perithecialibus nullis; peritheciis 100-140 µ, scabriusculis; ascis mox evanidis; sporidiis 4 septatis, brunneis, lenissime constrictis, obtusis, 31-34 \* 10-13.

Hab. in foliis Hyptidis spec. plur. (Labiate), Porto Rico. -Var. wombalensis Beeli, Bull. Jard. Bot. de l'Etat Bruxelles, v. 7., 1920, p. 95. - A typo differt peritheciis (140-200) et sporidiis majoribus (32-40 \* 13-16). - Hab. in foliis Hyptidis sp., Wombali,

Congo Africae trop. (VANDERHYST).

92. Meliola pelliculosa Syd., Enum. Philipp. Fungi II, in Philipp. 4434 Journ. of Sci. VIII (1913) p. 480. — Amphigena, foliorum superficiem pellicula plus minus continua aterrima facile separabili obducens; mycelio ex hyphis densissime intertextis, obscure fuscis, 7-9 µ cr., ramosis, septatis composito; hyphopodiis capitatis numerosissimis, breviter cylindraceis vel subclavatis, apice late rotundatis, 14-20 \* 8-10, fuscis, cellula basali brevi; hyphopodiis mucronatis rarioribus, ampulliformibus, usque ad 21 µ longis; setis mycelicis rectis, rigidis, apice acutis, simplicibus, opacis, superne

subinde plus minus dilutioribus,  $150-320 \times 7-9$ ; peritheciis sparsis, minutis, globosis, tuberculatis,  $100-130 \mu$  diam.; ascis bisporis, ovatis,  $40-50 \times 25-35$ ; sporidiis oblongis, utrinque late rotundatis, 4-septatis, ad septa valde constrictis, obscure brunneis,  $39-45 \times 14-17$ .

Hab. in foliis vivis vel languidis Lumnitzerae racemosae (Labiatae), Luzon, prope Manila, ins. Philipp. — M. gymnosporiae Syd. affinis, quae vero setis omnino caret.

93. Meliola Litseae Syd., Ann. Mycol. 15., 1917, p. 187. - Syn. Mel. Lit- 4485 seae A. S. Yates, Philipp. Journ. of Sc. 12., 1917, p. 366, Mel. Litseae P. Weid. Graff, Mem. Torr. Bot. Cl. 17., 1918, p. 61. - Amphigena, plagulas primitus minutas orbicularis 2-4 mm. latas dein saepe confluentes et effusas tenues formans; mycelium ex hyphis 9-10 µ crassis obscure brunneis septatis ramosis compositum; hyphopodia capitata numerosa, alternantia, subcylindracea vel ovatooblonga, 21-27 µ longa, cellula basali brevi vel mediocri, cellula superiore semper integra ovata vel ovato-oblonga et 10-13 u lata; hyphopodia mucronata solitaria vel opposita, rara, usque 26 µ longa; setae myceliales modice copiosae, subrectae vel curvatae, 350-700 µ longae, 9-11 µ crassae, biformes; aliae in superiore parte pellucide brunneae plus minus late rotundatae obtusae et integrae. aliae tota longitudine opacae ad apicem dentes vel ramulos breves 2-4 usque 12 µ longos gerentes; perithecia sparsa globosa 160-180 µ diam.; in sicco collapsa; asci 2-3 spori; sporae oblongae, utrinque late rotundatae, castaneo-brunneae, 4-septatae, vix vel leniter constrictae, 40-45 × 18-20.

Hab. in foliis Litseae Perrottetii, L. glutinosae (?) (Lauraceae), Los Baños, Calauan, Bataan, S. Antonio etc., Ins. Philipp. (BAKER, Mc GREGOR, RAMOS). — Mel. Litseae Yates, et P. W. Graff, etiam ex Philippinis, verisimiliter eadem est ac M. Litseae Sydow quae anterior.

94. Meliola Ocoteae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4436 1916, p. 497. — Coloniis hypophyllis, irregularibus 5-10 mm. diam.; mycelio atro, 6 μ crasso, sinuoso, laxo, opposite vel alterne ramoso; hyphopodiis capitatis alternis vel unilateralibus, 50-80 μ inter se distantibus, cellula capitata ovoidea vel angulari, 20 × 14, basilari 10-14 μ longa; hyphopodiis mucronatis paucis, ampulliformibus; setis mycelialibus nullis, perithecialibus copiosis, rectis vel leniter curvis, rigidis, fuscis, apice obtusis, 85 μ circ. longis; peritheciis 170 μ diam., atris; ascis evanidis; sporidiis 4-septatis, fuscis, constrictis, utrinque paullo attenuatis, 50 × 14.

Hab. in foliis Ocoteae leucoxyli (Lauraceae), Jajome Alto, Porto Rico. — M. Mollerianae similis sed characteribus mycelii et setarum perithecii distincta. Status conidicus saepe copiosus.

95. Meliola ocoteicola Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4437 1916, p. 513, fig. 43. — Coloniis amphigenis, irregularibus, 3-10 mm. diam., confluentibus; mycelio laxiuscule reticulato-contexto, ramis plerumque oppositis, 7 μ crasso; hyphopodiis capitatis alternis, haud crebris, 30 μ circ. inter se distantibus, cylindraceis, cellula capitata basilari vix crassiore, apice obtusa, cellula basilari brevissima; hyphopodiis mucronatis paucis, sparsis, plerumque oppositis, conoideo-ampulliformibus, 20 × 6; setis perithecialibus nullis, mycelialibus paucis, rectis curvulisve, 300·350 μ longis, fuscis, apice acutis; peritheciis 150 μ diam, non ostiolatis; ascis cito diffluentibus; sporidiis 4-septatis, brunneis, valde constrictis utrinque obtusis, 40 × 17.

Hab. in foliis Ocoteae leucoxyli (Lauraceae), Mayaguez et Monte Alegrillo, nec non in foliis Chrysophylli sp. (Sapotaceae), Monte Alegrillo, Porto Rico.

96. **Meliola acutiseta** Syd., in Leaflets of Philipp. Bot. VI (1913) 4438 p. 1921. — Mycelio hypophyllo plagulas circulares 3-10 mm. latas, atras efformante, ex hyphis longiusculis, parce ramosis, obscure brunneis, 5-6,5  $\mu$  crassis composito; hyphopodiis mucronatis raris, plerumque oppositis, 15-20  $\mu$  longis; hyphopodiis capitatis variabilibus, bicellularibus, rectis vel leniter curvatis, saepe leniter lobatis aut angulatis, 15-20  $\nu$  6-10; setis mycelicis numerosis, simplicibus, rectis, erectis, apice acutis, opacis, 275 400  $\nu$  7-9, peritheciis sparsis, globosis, in sicco non vel vix collapsis, aterrimis, leniter rugulosis, 150-180  $\mu$  diam.; ascis ovatis, 2-3-sporis, 40-55  $\nu$  18-28; sporidiis oblongis, 4-septatis, ad septa leniter constrictis, utrinque rotundatis vel uno fine saepe leniter attenuatis, brunneis, 35-40  $\nu$  11,5-13.

Hab. in foliis vetustis Perseae piriformis (Lauraceae), Cabadbaran, Mindanao, ins. Philipp. — Affinis M. laevigatae Syd. cui habitu similis sed characteribus hyphopodiorum, setularum et sporidiorum distincta.

97. Meliola Perseae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4439
1916, p. 485 fig. 10. — Coloniis hypophyllis, irregularibus, atris,
2-5 mm. diam.; mycelio valde contorto, sinuoso, irregulariter, opposite, alterne vel dichotome ramoso, intense atro, 9 μ crasso; hy-

phopodiis capitatis alternis vel irregularibus, cellula capitata ovatopiriformi, cuneiformi vel angulosa; hyphopodiis mucronatis alternis, variabilibus; setis mycelialibus et perithecialibus nullis; peritheciis  $100\text{-}200~\mu$  diam., atris, ob papillas late conoideas scabris; ascis evanidis; sporidiis 4-septatis, valde constrictis, atro brunneis, utrinque rotundatis,  $44 \times .24$ .

Hab. in foliis Perseae gratissimae (Lauraceae), Las Marias, Porto Rico. — Mycelio valde irregulari et setularum defectu praecipue distincta; M. calvae proxima, a qua tamen peritheciis scabris recedit.

98. Meliola indica Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, p. 382.— 4440 Amphigena velutina; mycelio maculas atras orbiculares 2-6 mm. latas formante; hyphis fuscis, 6-8 μ cr.; hyphopodiis numerosis et dense stipatis, capitatis oppositis v. alternantibus, usque 14 μ long. et 11 μ latis, mucronatis oppositis et usque 18 μ long; setis mycelii numerosis, simplicibus, rigidis, remote septatis, acutis, 250-400 μ long. 9-12 μ crassis; peritheciis globosis, atris, verruculosis, 170-210 μ diam.; ascis fugacibus, 2-4 sporis; sporidiis 4-septatis, constrictis, utrinque rotundatis, fuscis, 45-50 × 14-18.

Hab. in foliis Barringtoniae acutangulae (Lecythidaceae), Dacea, Indiae or. (A. Som). — M. amphitrichae affinis, sed hyphopodiis diversa.

99. Meliola Barringtoniae H. S. Yates, Philipp. Journ. Sc. Manila XII 4441 (1917), p. 363. — Epiphylla, maculas orbiculares 2-4 mm. diam., saepe confluentes, atras; mycelio ex hyphis paucis flexuosis radiantibus irregulariter ramosis brunneis septatis 10.μ latis composito; hyphopodiis capitatis numerosis, plerumque oppositis, vel alternantibus, cellula superiore globosa 12-14 μ lata; cellula inferiore 5 μ longa; hyphopodiis mucronatis paucis, ampulliformibus, usque ad 20 μ longis, 12 μ latis; setis mycelicis numerosis, atris, opacis, validis, 200-300 × 12-18, erectis, rectis vel leniter curvatis, acutis; peritheciis globosis, atris, opacis, tuberculatis, 140-200 μ diam.; ascis ellipsoideis, 4-sporis, evanescentibus, 50-60 × 18-22; sporidiis cylindraceis, utrinque late rotundatis, 4-septatis, ad septa constrictis, brunneis, 40-50 × 14-18.

Hab. in foliis Barringtoniae luzonensis (Lecythida ceae), Cavite Prov. Luzon, ins. Philipp. (RAMOS et DEROY).

100. Meliola Andirae Earle — Syll. XXII p. 46 — var. Puttemansii G. 4442 Arnaud, Ann. Ecole Nat. Agricult. Montpellier, t. 16., 1918, p. 229, tab. 51 (ad int., sine diagn.).

Hab. in foliis Andirae sp. (Leguminosae), San Paulo, Mattos da Serra da Cantareira, Brasilia (PUTTEMANS, in Putt. Fungi S. Paulens. 234).

101. **Meliola Bauhiniae** H. S. Yates, The Philipp. Journ. of Sc., Bot. 4443 13., 1918, p. 365. — Hypophylla, plagulas atras, velutinas, orbiculares, 3-6 mm. diam. efformans; mycelio ex hyphis intertextis ramosis anastomosantibus castaneo-brunneis 4-5 μ crassis formato; hyphopodiis capitatis numerosis, alternantibus, vel unilateralibus, cellula superiore subglobosa, 12-13 μ diam., cellula inferiore 5-8 μ longa; hyphopodiis mucronatis paucis, usque ad 20-25 μ longis; setis mycelicis numerosissimis, rectis, erectis, simplicibus, ad apicem subacutis, atris, tota longitudine opacis, 200-250 μ longis, 8 μ cr.; peritheciis sparsis, 170-200 μ diam., globosis, tuberculatis, atris, opacis, astomis; ascis bisporis, ellipsoideis, 40-45 × 20-25; sporidiis cylindraceis, 4-septatis, ad septa constrictis, utrinque late rotundatis, brunneis, 40 × 12-15.

Hab. ad folia Bauhiniae sp. (Leguminosae), Llocos Norte Prov., Luzon, Ins. Philipp. (ROMANOS).

102. Meliola cylindrophora Rehm, Ascom. Philippin. I in Philipp. Journ. 4444 of Sc. VIII, 1913, p. 181 et ap. Sydow, Enum. Philipp. Fungi II, in l. c. p. 480. — Mycelio epiphyllo, rarius hypophyllo, maculas minutas 1-4 mm. latas aegre conspicuas formante, laxo, radiante, ex hyphis longiusculis, rectis, ramosis, fuscis, 7-8 μ latis, septatis composito; hyphopodiis capitatis numerosissimis, plerumque perfecte oppositis, cylindraceis, fere semper rectis et aequalibus, apice late rotundatis, 11-16 × 8-9, bicellularibus, cellula basali brevissima subinde vix conspicua; hyphopodiis mucronatis rarioribus usque ad 21 μ longis; setis mycelicis paucis, erectis, rectis, ad basim geniculatis, simplicibus, septatis, inferne subopacis, apice dilutioribus et acutiusculis, 150-340 × 7-8; peritheciis paucis vel solitariis in quaque macula, globosis, late umbilicatis, 120-170 μ diam.; ascis plerumque bisporis, ovatis; sporidiis oblongis, utrinque late rotundatis, 4-septatis, ad septa constrictis, 36-40 × 15-17, fuscis.

Hab. in foliis vivis Caesalpiniae nugae (Leguminosae), Luzon, ins. Philipp. (MERRILL).

103. Meliola crenatissima Syd., Ann. Mycol. 14., 1916, p. 77, fig. 2.— 4445 Epiphylla, plagulas orbiculares minutas 2-4 mm. diam. griseolas tenues formans; mycelio radiante, dense adpresso, ex hyphis plus minus distincte rectangulariter ramosis fuscis 7-8 μ crassis composito; hyphopodiis capitatis numerosis, plerumque alternantibus,

18-26  $\mu$  longis, cellula superiore globosa usque ovata 11-14  $\mu$  lata, inferiore brevi; hyphopodiis mucronatis non visis, setis mycelicis sat numerosis, erectis, rectis, dilute brunneis usque castaneo-brunneis sed tota longitudine pellucidis, 250-330  $\times$  7-10, apicem versus valde crenatis, (denticulis brevissimis usque longioribus et tunc 3-5  $\mu$  longis semper obtusis); peritheciis paucis in quaque plagula, globosis, astomis, 130-150  $\mu$  diam.; ascis 2-3 sporis; sporidiis cylindraceis, utrinque obtusis, 4-septatis, parum constrictis, sordide brunneis, 32-40  $\times$  10-14.

Hab. in foliis Calopogonii caerulei (Leguminosae), Seringal Auristella, Rio Acre, Peruviae (E. ULE).

104. Meliola aethiops Sacc., Notae Mycol. XXIV p. 3 (Bull. Orto bot. 4446 Nap., 1918). — Coloniis epiphyllis, gregariis, subcircularibus, 2-3 mm. latis, interdum confluentibus, nigris, velutinis; mycelio radianti, fuligineo ramoso, hyphopodiis ovatis, conformibus, bilocularibus, 12-15  $\times$  8, praedito, setulisque filiformibus, simplicibus, obtusulis, septatis, fuligineis, 170  $\times$  7, interspersis; peritheciis globulosis, astomis, colliculosis, nigris, 145  $\mu$  diam.; ascis ovoideis, plerumque 2-sporis; sporidiis oblongis, constricto-4 septatis, 32  $\times$  12, fuligineis.

Hab. in foliis vivis Cassiae Fistulae (Leguminosae), in Horto bot. Singapore (BAKER). — Pulchella species in planta medicinali, tam obvia, nondum indicata.

105. Meliola toruloidea Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4447 II, 1916, p. 493, fig. 21. — Coloniis amphigenis, in hypophyllo magis copiosis, circularibus, 1-4 mm. diam.; mycelio atro densiuscule reticulato, ramis oppositis vel alternis 7 μ diam., leniter undulatis; hyphopodiis capitatis alternis, non crebris, uno pro cellula, cellulis 20 μ circ. longis; cellula capitata piriformi 20 × 14, basilari brevissima, 5-6 μ; hyphop. mucronatis oppositis, phialiformibus; setis mycelialibus nullis, perithecialibus paucis vel copiosis, saepe 30-40, sparsis, valde uncinatis vel spiraliter incurvis, 70 × 7-8, atris; peritheciis juvenilibus non radiatis, 170 μ diam., ob papillulas rotundatas leniter scabris; ascis mox evanidis; sporidiis 4-septatis, brunneolis, constrictis, obtusis, 34 × 16.

Hab. in foliis Cassiae et Ingae (Leguminosae), Porto Rico.
106. Meliola chamaeoristicola Stev., Mel. Porto Rico, in Ill. Biol. Mo-4448 nogr. II, 1916, p. 494, fig. 24. — Coloniis epiphyllis, circularibus, 1-2 mm. diam., mycelio atro, sat dense reticulato, 7 μ crasso; hyphopodiis capitatis gracilibus, alternis, non crebris, 1 pro cellula,

cellulis circ. 14-17  $\mu$  longis, cellula capitata ovoidea 14  $\approx$  10, basilari 3  $\mu$  longa; hyphopodiis mucronatis alternis vel oppositis, ampulliformibus, 14-16  $\approx$  6; setis mycelialibus nullis, perithecialibus paucis, rectis vel leniter curvatis, 80  $\approx$  4, apice obtusis, ubique fuscis; peritheciis 170  $\mu$  diam., papillis rotundatis scabris; ascis mox evanidis; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis, 34  $\approx$  14.

Hab. in foliis Chamaecristae granulatae (Leguminosae), Mona Island, Porto Rico. — A caeteris speciebus proximis differt setis valde gracilibus.

107. Meliola abrupta Syd., Ann. Mycol. 15., 1917, p. 181. - Amphigena. 4449 saene autem tantum hypophylla vel epiphylla, plagulas tenues arachnoideas minutas vel confluendo majores (usque 1 cm. diam.) saepe irregulares formans; mycelium ex hyphis 6-8 µ crassis rectangulariter ramosis fuscis septatis compositum; hyphopodia capitata numerosa, opposita vel alternantia, 13-20 u longa, cellula superiore ovata, subglobosa vel piriformi 9-11 u lata, inferiore minuta: hyphopodia mucronata etiam numerosa, opposita vel alternantia, pallidiora, inferne globulosa et ventricosa, superne abrupte in collum longum angustum cylindraceum producta, 20-24 µ longa, inferne 8-9 µ lata; setae mycelicae modice copiosae, simplices, rectae, plerumque tota longitudine opacae, ad apicem acutae, 200.400 µ longae, ad basim 9-11 µ latae; perithecia laxe aggregata, globosa, in sieco collapsa, 110-160 µ diam., levia; ascis 2-3-sporis; sporae cylindraceae, utrimque rotundatae, 4-septatae, constrictae, fuscae,  $35-42 \times 10-13$ .

Hab. in foliis Derridis diadelphae et Derridis spec. (Leguminosae), prov. Rizal, Luzon, Ins. Philipp. (M. RAMOS).

108. Meliola Derridis H. S. Yates, The Philipp. Journ. of Sc. Bot. 13., 4450 1918, p. 368. — Epiphylla, plagulas atras, orbiculares 3-5 mm. diam., vel confluentes et subinde totam folii superficiem obtegentes efformans; mycelio radiante, ex hyphis fuscis anastomosantibus 6-7 μ crassis composito; ramis plerumque oppositis; hyphopodiis capitatis numerosis, alternantibus, cellula superiore rotundata 10°. 12 μ diam., cellula inferiore 5 μ longa; hyphopodiis mucronatis numerosis, oppositis ampulliformibus, usque ad 20·25 μ longis; setis mycelicis numerosis, erectis, rectis vel curvatis, 300·400 μ longis, 7-8 μ latis, castaneo-brunneis, subopacis, apicibus obtusis; peritheciis paucis, globosis, atris, 125-150 μ diam; ascis non visis; sporidiis 4-septatis, oblongis, utrinque rotundatis, obscure fuscis,

30-35 \* 11-13, ad septa constrictis.

Hab. ad folia Derridis (Leguminosae), Burgos, Prov. Llocos Norte, Luzon, Ins. Philipp. (RAMOS). — Verisimiliter eadem est ac Mel. abrupta.

109. Meliola bicornis Wint. - Syll. IX p. 422. - var. heterotricha Spe- 4451 gaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba. t. 23. 1919. Extr. p. 87. - A typo differt subiculo hyphis obscurioribus apice tantum pellucidis, acutis, nonnullis tantum bidenticulatis: hyphopodiis plerumque alternis variabilibus, aliis globosis sessilibus v. pedicellatis, aliis expansis, apiculis ampullaeformibus; peritheciis globosis 129-180 µ diam. papillosulis, sporidiis 4-septatis. cylindraceis 34 × 10, loculis apicalibus subhemisphaericis. - Hab. iu foliis Desmodii incani? (Leguminosae), prope Apiahy. America austr. (J. Puiggari) .- Var. Calopogonii Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 1916, p. 532. - A typo differt setis rigidioribus, uniformiter minute denticulatis, nec non hyphopodiis capitatis paullo latioribus. - Hab, in foliis Calopogonii orthocarpi (Leguminosae), Mayaguez et Aguada, Porto Rico. Var. Galactiae Stev., loc. cit. p. 533. - Hyphopodiis capitatis latis, plerumque etiam setis divisis a typo satis differt. - Hab. in foliis Galactiae dubiae (Leguminosae), Rio Tanama, Porto Rico. Var. Milletiae Beeli, Bull. Jard. Bot. Etat Bruxelles, v. 7., 1920. p. 94. - A tipo recedit setis mycelicis pallidis non opacis, ad apicem verrucosis v. 2-3-dentatis, 350-540 \* 7-9. - Hab. in pagina superiore foliorum Millettiae sp. (Leguminosae), in valle Mobi Lukunga, Congo Africae trop. (VANDERYST).

110. Meliola heterocephala Syd., Ann. Mycol. 14., 1916, p. 356, fig. . — 4452 Epiphylla, plagulas minutas 1-3 mm. diam. tenues arachnoideas formans; mycelio plerumque parco, ex hyphis fuscis 5-8 μ crassis breviter ramosis anastomosantibus formato; hyphopodiis capitatis sat numerosis, alternantibus 12-20 μ longis, cellula superiore semper rotundata integra subglobosa vel ovata, 9-12 μ lata, inferiore brevi; hyphopodiis mucronatis rarioribus, oppositis; setis tantum ad basim paritheciorum evolutis, modice numerosis, 150-300 μ longis, 8-9 μ latis, ad apicem plerumque dilatatis (usque 12 μ), obscure brunneis, subopacis vel sursum subinde subpellucidis, ad apicem plerumque irregulariter incurvo-uncinatis et denticulos plus minus numerosos variae longitudinis gerentibus; peritheciis paucis in quaque plagula, globosis, in sicco collapsis, 120-160 μ diam., vix vel leniter tuberculatis, astomis; ascis 2-3-sporis, fugacibus, 35-40

\*18-24; sporidiis cylindraceis, sordide brunneis, 4-septatis non vel leniter constrictis, utrinque rotundatis, 26-34\*9-11, cellulis aequalibus.

Hab. in foliis Desmodii sp. (Leguminosae), M. Maquiling, ins. Philipp. (C. F. BAKER).

111. Meliola Zollingeri Gail. — Syll. XI, p. 268 — var. minor Beeli, 4453 Bull. Jard. Bot. État Bruxelles v. 7., 1920, p. 100. — A typo differt: maculis non velutinis, peritheciis minoribus, 150-160, setis mycelicis plerumque 2-4 furcatis, leniter torulosis minoribus 220-250 × 6-7; hyphopodiis capitatis alternis, 14 × 12; sporidiis minoribus 36-39 × 10-12.

Hab. in foliis Desmodii sp. (Leguminosae), Kikwit, Bokala, Congo, Africae trop. (VANDERYST).

112. **Meliofa desmodiicola** Beeli, Bull. Jard. Bot. État Bruxelles, v. 7., 4454 1920, p. 94. — Epiphylla; maculas atras irregulares, crustaceas 1-3 mm. diam. efformans, hyphis fuscis plus v. minus sinuosis, densis,  $30\text{-}40 \approx 8$ ; hyphopodiis capitatis oppositis v. unilateralibus, cellula apicali subglobosa  $10\text{-}12~\mu$ , cell. bas. brevi  $4\text{-}6 \approx 8$ ; hyphop. mucronatis. numerosis suboppositis; peritheciis verruculosis, fusco-atris, subostiolatis  $150\text{-}200~\mu$ ; setis mycelicis sparsis, paucis, brunneis pellucidis, septatis, simplicibus, rectis, apice obtusis et leniter inflatis  $280\text{-}300 \approx 7$ ; ascis evanescentibus; sporidiis 4-septatis, obtusis, ad septa constrictulis, cylindraceis, rectis curvulisve  $37\text{-}40 \approx 10\text{-}13$ .

Hab. in pag. sup. foliorum Desmodii sp. (Leguminosae), Wombali, Congo, Africae trop. (VANDERYST).

113. Meliola Erythrinae Syd., Ann. Mycol. 15., 1917, p. 185.— Epiphylla; 4455 plagulas primitus minutas 2-3 mm. diam. tenues dein plus minus confluentes effusas et saepe totum folium occupantes formans; mycelium laxum, ex hyphis longiusculis pellucide brunneis 7-9 μ latis septatis (articulis 25-40 μ longis) laxe ramosis subrectis vel flexuosis compositum; hyphopodia capitata numerosa, alternantia piriformia, integra, 17-22 μ longa, cellula superiore ovata vel globulosa 12-14 μ lata, inferiore brevi, hyphopodia mucronata opposita, usque 22 μ longa, basi 7-9 μ lata; setae mycelicae paucae, rectae vel parum curvatae, simplices, apice obtusae, 300-500 μ longae, basi 9-10 μ latae, tota longitudine vel saltem in superiore parte pellucidae; perithecia laxe gregaria, globosa, 100-160 μ diam., astoma, ex cellulis 8-10 μ diam. composita, cellulis periphericis multo majoribus conoidee vel papilliformiter elongatis usque 30 μ longis basi ca. 20-24 μ latis; asci 2-4-spori; sporae oblongae, utrinque rotun-

datae, 4-septatae, leniter constrictae brunneae, 35-42 × 11-15.

Hab. in foliis Erythrinae indicae (Leguminosae), Laguna, Luzon, Ins. Philipp. (M. RAMOS).

114. Meliola Gleditschiae Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4456 Buenos Aires, XXIII p. 41 (1912). - Caespitulis amphigenis, primo discretis, 1-3 mm. diam., dein confluentibus et saepe totum folium obtegentibus, parce setulosis, facile deciduis; hyphis repentibus densinscule intertextis, sat flexuosis, obscure fuligineis, 10 µ cr.; hyphopodiis densiusculis, antrorsis, non adpressis, saepius clavulatis alternisque, bicellularibus, 30 × 12-15, raro lageniformibus et oppositis, semper fuligineo-pellucidis; setulis praecipue circa perithecia evolutis, erectis, 200-300 \* 10-12, rectiusculis, apice obtusiusculis et saepe conidium cylindraceo-fusoideum, 4-septatum, 30-35 × 6-7, fuligineum gerentibus; peritheciis subglobosis, 200-250 μ diam., coriacellis, glabris, non collabescentibus, astomis; ascis ellipsoideis, 65 \* 35-40, bisporis, mox diffluentibus; sporidiis subcylindraceis, utringne truncatis, 4-septatis, vix constrictis, e latere tenuiter compressis, 50 \* 20-22 \* 17-18, loculo centrali paullo majore. fuligineis.

Hab. in foliis vivis Gleditschiae amorphoidis (Leguminosae), in silvis prope Puerto Leon, Misiones: Argentina,

115. Meliola Gliricidiae H. et P. Sydow, Ann. Mycol. XII, 1914, p. 550.— 4457 Epiphylla, plagulas parum perspicuas orbiculares 0,5-1 cm. diam. formans; mycelio radiante, fere rectangulariter ramoso, matrici adpresso, ex hyphis longiusculis fuscis 6-9 μ er. composito; hyphopodiis capitatis numerosis, 15-18 μ long., cellula superiore globosa v. ovata 11-14 μ diam., basali brevissima, integris alternantibus v. unilateralibus; hyphopodiis mucronatis raris, oppositis; setis mycelicis modice numerosis, rigidis, erectis, simplicibus, apice acutis, tota longitudine opacis, 120-160 × 6-7; peritheciis sparsis, globosis, astomis, parum tuberculatis, 100-150 μ diam.; ascis 2-3-sporis; sporidiis cylindraceis, utrinque obtusis, 4-septatis, parum constrictis, fuscis, 32-36 × 12-14.

Hab. in foliis Gliricidiae sepium (Leguminosae), prov. Rizal, Ins. Philippin. (M. RAMOS).

116. Meliola bataanensis H. et P. Sydow, Ann. Mycol. XII, 1914, 4458 p. 551. — Mycelio epiphyllo, tenui, subarachnoideo, plaguias parum distinctas 2-10 mm. diam., saepe confluentes et magnam folii partem occupantes formante; hyphis rectis, ramosis, remote septatis, fuscis, 7-8 μ latis; hyphopodiis capitatis alternantibus sat

numerosis, rectis v. rarius apice leniter curvatis, crasse cylindraceis, bicellularibus, obtusis, 12-18  $\times$  8-10, cellula basali brevi; hyphopodiis mucronatis oppositis, rarioribus; setis mycelicis rectis, erectis, apice acutissimis, opacis, 175-420  $\times$  7-9; peritheciis dispersis, globulosis, 130-160  $\mu$  diam., verruculosis, contextu ex cellulis 8-10  $\mu$  diam., in sicco collapsis; ascis 2-4 sporis, ovatis; sporidiis oblongis, utrinque late rotundatis; 4-septatis, constrictis, fuscis, 35-38  $\times$  12-14.

Hab. in foliis Millettiae sp. (Leguminosae), Lamao prov. Bataan Luzon, Ins. Philippin. (E. D. MERRILL).

117. Meliola Pterocarpiae H. S. Yates, F. from Brit. N. Borneo, in Phy- 4459 lipp. Journ. of Sc. Bot., v. 13., 1918, p. 235. — Maculis epiphyllis, subpelliculosis, atris, orbicularibus vel suborbicularibus, 2 ad 6 mm. diametro, vel confluentibus et magnam partem folii occupantibus, mycelio tenuissimo, ex hyphis parce ramosis brunneis 6-8 μ crassis composito; ramis plerumque oppositis; hyphopodiis capitatis numerosis, alternantibus, cellula superiore ovata, 11-13 × 19-12, cellula inferiore 5 μ longa; hyphopodiis mucronatis paucissimis, ampulliformibus, usque ad 18 μ longis; setis mycelicis validis, rectis, erectis, atris, opacis, simplicibus, acutis, 200 × 10 12, peritheciis numerosis, globosis, atris, opacis, 125-140 μ diametro; ascis ovatis, bisporis, mox diffluentibus; sporidiis cylindraceis, utrinque late rotundatis, 4-septatis, ad septa constrictis, brunneis, 38-40 × 12-15.

Hab. in foliis Pterocarpi in dici (Leguminosae), Tenom in ins. Borneo bor. — Socium Phaeodothiopsis Pterocarpi Yat.

118. Meliola banosensis Syd., Ann. Mycol. 14., 1916, p. 356.— Epiphylla 4460 vel petiolicola, plagulas primitus minutas dein confluentes et plus minusve effusas leniter velutinas atras formans; mycelio parco, effuso, ex hyphis fuscis 7.9 μ crassis ramosis septatis (articulis 10.25 μ longis) formato; hyphopodiis capitatis modice numerosis, alternantibus, bicellularibus, cellula superiore globulosa vel depressoglobosa integra 10.13 μ alta 10.15 μ lata, cellula inferiore usque 8 μ alta saepe brevissima vel subnulla; hyphopodiis mucronatis raris; setis mycelicis copiosis, rectis vel subrectis, 300-700 μ longis, basi 9.10 μ latis, ad apicem acutis, tota longitudine opacis, 2.4-septatis; peritheciis laxe gregariis globosis, 130-160 μ diam., atris, poro minuto pertusis, vix tuberculatis, in sicco profunde collapsis, contextu ex cellulis ca. 10 μ diam. composito; ascis ovatis, fugacibus, 40-60 × 22-28, 2-4-sporis; sporidiis cylindraceis, utrin-

que obtusis, rectis, 4-septatis, non vel vix constrictis, sordide brunneis,  $32-86 \times 10-15$ , loculis omnibus aequalibus.

Hab. in foliis Puerariae sp. (Leguminosae), Los Baños, ins. Philipp. (C. F. BAKER).

119. Meliola Rudolphiae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4461 II, 1916, p. 511, fig. 41. — Mycelio semper epiphyllo, atro, undulato maculas circulares efformante vel irregulariter diffuso; setis mycelialibus copiosis, longis, 400  $\mu$ , atris, attenuatis, septatis, acutis, simplicibus; hyphopodiis capitatis alternis, cellula basilari brevi, 3-6  $\mu$ , capitata irregulari, plerumque lateraliter incurva,  $10 \times 17$ ; hyphopodiis ampulliformibus alternis,  $21 \times 7$ ; peritheciis numerosis, racemose acervatis, atris, 150 170  $\mu$  diam., depressiusculis, siccis collapsis, papillis brevibus scabris; ascis 4-sporis,  $65 \times 27$ ; sporidiis 4-septatis, obscure brunneis, utrinque rotundatis, modice constrictis,  $48-51 \times 17-20$ .

Hab. in foliis Rudolphiae volubilis (Leguminosae), Porto Rico. — M. Montagnei affinis; differt colore, sporidiis, mycelii exiguitate et densitate.

120. Meliola Schizolobii Syd., Ann. Mycol. 14., 1916, p. 76.— Epiphylla, 4462 plagulas minutas 3-6 mm. diam. tenues laxas griseolas formans, mycelio eximie radiante, matrici dense adpresso, rectangulariter ramoso, ex hyphis fuscis 6 7 μ crassis composito; hyphopodiis capitatis numerosis, in longa serie oppositis, singulis unilateralibus, 11-18 μ longis cellula superiore globulosa vel ovata 9-11 μ lata, inferiore minuta vel minutissima saepe vix visibili, integris; hyphopodiis mucronatis non visis; peritheciis sparsis, globosis, astomis, 80-100 μ diam.; setis mycelis sat numerosis, rectis vel fere rectis, rarius parum flexuosis, tota longitudine pellucidis, crasse tunicatis septatis, dilute fuscis usque fuscis, ad apicem saepe subhyalinis, apice obtusis vel breviter 2-4-furcatis (dentibus plerumque brevissimis 2-3 μ longis, rarius longioribus usque 10 μ); ascis non visis; sporidiis cylindraceis, utrinque obtusis, 4-septatis, leniter constrictis, 26-30 × 10-13.

Hab. in foliis Schizolobii excelsi (Leguminosae), Seringal, S. Francisco, Rio Acre, Brasiliae (E. ULE).

121. Meliola Tamarindi P. et H. Syd., Ann. Mycol. X, 1912, p. 79.— 4463 Mycelio epiphyllo, subvelutino, atro, ex hyphis ramosis anastomosantibus dense intertextis 8-11 μ cr. brunneis formato; hyphopodiis alternantibus, stipitatis, bicellularibus, cum stipite 15-30 μ long. 10 μ cr.; setis mycelii simplicibus, erectis, rectis, obscure brunneis,

usque 400  $\mu$  long. 7-10  $\mu$  cr.; peritheciis aggregatis, globosis, atris, tuberculatis, 175-250  $\mu$  diam., contextu ex cellulis 11-14  $\mu$  latis composito; ascis clavulatis 50-60  $\times$  20, 2-3-sporis; sporidiis oblongis, 4-septatis, constrictis, utrinque rotundatis, obscure brunneis, 36-44  $\times$  13-17.

Hab. in foliis Tamarindi indici (Leguminosae), pr. Manila, ins. Philippin. (E. D. MERRILL).

122. Meliola Teramni (Sacc.) Syd., Ann. Mycol. 15., 1917, p. 193, M. ni- 4464 gro-rufescens var. Teramni Sacc. in Atti Accad. Ven. Trent. Istr. X. 1917, p. 60. -- Epiphylla, plagulas minutas 1-3 mm. diam. subinde confluentes tenues formans; mycelium ex hyphis toruloso-flexuosis brunneis 7-8,5 μ crassis ramosis anastomosantibusque septatis compositum; hyphopodia capitata numerosa, alternantia vel opposita. plerumque ovata, 16-22 µ longa, cellula superiore ovata vel subglobosa semper integra saepe recurvata 12-15 µ lata, cellula inferiore brevissima; hyphopodia mucronata etiam copiosa, opposita, lageniformia, 18-24 µ longa, subito in collum longiusculum producta, basi 7-8 µ lata; setae myceliales modice copiosae, rectae vel subrectae, 500-750 µ longae, basi 9-11 µ crassae, inferne opacae, superne semper pellucide brunneae, ad apicem late obtusae vel truncatae sive simplices, sive dentes 2.4 brevissimos vel longiores (2-15 μ longos), erectos gerentes; perithecia laxe gregaria, globosa, astoma, 120-170 \( \mu\) diam., glabra; asci ovati, 40-48 \( \infty\) 25-35, bi-trispori; sporae oblongo-cylindraceae, 4-septatae, vix vel leniter constrictae, brunneae, utrinque obtusae, 36-42 > 11-15, cellulis aequalibus.

Hab. in foliis Teramni uncinati (Leguminosae), Los Baños, Laguna (C. F. BAKEE), T. labialis, Kalinga Luzon, Ins. Philipp. (H. S. YATES).

123. Meliola Castanha Theiss., Broteria, Bot., v. XII, 1914, fasc. I, 4465 p. 24. — Mycelio amoene radiato, plagulas 2-4 mm. latas circulares efformans. Hyphae 10-14 μ crassae, fuligineo-brunneae, asperulogranulosae, typice (at inconstanter) opposite ramosae, septis 40 μ distantibus. Hyphopodia capitata alterna, elongato-clavata, pedicellata, recta (rarius recurvata), integra, 30-32 μ longa, supra 12-16 μ lata; hyphopodia mucronata latiora, ampulliformia, collo recurvo. Setae myceliales nigrae, rectae, basi non vel vix brevissime geniculatae, basi 10 μ crassae, usque 500 μ longae, apice laetiores acutiusculae integrae vel obsolete lateraliter denticulatae. Perithecia in centro plagarum dense gregaria, globulosa, grosse verru-

cosa, atro-nitentia, 200-250  $\mu$  diam., astoma, glabra, cellulis polygoniis robustis 15-20  $\mu$  latis rubro-branneis (extus polygonaliter prominentibus) contexta. Asci 2-3 spori, elliptici, 70-75 \* 42. Sporae 4-septatae, semper laete olivaceae, guttulis destitutae, cylindraceae, 56-68 \* 24-28, ad septa modice constrictae, cellulis aequalibus (extimis paulo majoribus).

Hab. epiphylla in foliis Leguminosae scandentis, vulgo « Castanha » dictae, S. Leopoldo, Brasiliae meridionalis.

124. Meliola Smilacis Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4466 1916, p. 524. — Coloniis amphigenis sed in epiphyllo magis copiosis, irregulariter circularibus, 2-4 mm. diam., mycelio modice contexto, non undulato, opposite ramoso; hyphopodiis capitatis alternis, oppositis vel unilateralibus, cellula capitata cylindraceo-subglobosa,  $14 \times 11$ , basilari brevi, circ.  $4~\mu$ ; hyphopodiis mucronatis raris, conoideis, collo breviter attenuato, vel ampulliformibus, collo magis elongato; setis mycelialibus copiosis 500  $\mu$  circ. altis, sursum attenuatis, basi 10  $\mu$  cr., apice obtusis, raro bifidis, pallidis, basi opacis; setis vel appendicibus perithecialibus nullis; peritheciis 200  $\mu$  circ. diam., osciolo minutissimo praeditis; ascis mox evanidis, brevibus; sporidiis 4-septatis, leniter constrictis, utrinque obtusis,  $15 \times 17$ .

Hab. in foliis Smilacis (Liliaceae), Porto Rico.

125. Meliola Fagraeae H. et P. Sydow, Ann. Mycol. XII, 1914, p. 549.— 4467 Hypophylla, plagulas aterrimas velutinas orbiculares 1/2·1 1/2 cm. diam. valde conspicuas formans; mycelio radiante, dense depresso, ex hyphis dense intertextis torulosis fuscis opacis 7-10 μ crassis composito; hyphopodiis capitatis numerosissimis, dense stipatis, ovato-oblongis, obtusis, bicellularibus, 18-26 > 10-12; setis mycelicis numerosis, erectis, rectis, lanceolatis, apice acutis, tota longitudine opacis, 300-400 μ long. 8-10 μ latis; peritheciis sparsis, astomis, globosis, 130-160 µ diam.; ascis ovatis bisporis; sporidiis cylindraceis, utrinque late rotundatis, 4-septatis, leniter constrictis, obscure castaneo-brunneis, subopacis, 40-50 \* 16-21; mycelio conidiifero copiose evoluto Helminthosporii speciem sistente; hyphis fertilibus erectis, rectis v. parum flexuosis, laxe fasciculatis, plus minus toruloso contortis, 175-400 × 6-9, fuligineis, septatis (articulis 22-35 µ longis); conidiis acrogenis, fusoideis, 3-4 septatis, totis 34-48 \mu long., medio 7-10 \mu latis, utrinque (praecipue ad apicem) attenuatis, fuligineis.

Hab. in foliis Fagraeae plumeriaefoliae (Logania-

ceae), Mt. Isarog prov. Camarines, Ins. Philippin. (M. RAMOS). 126. Meliola catubigensis H. S. Yates, Philipp. Journ. Sc. Manila, XII 4468 (1917) p. 363. - Amphigena, plerumque epiphylla, maculas atras. orbiculares, 5-10 mm. diam. vel confluentes et folii superficiem plus minusve continue obtegente, mycelio ex hyphis brunneis septatis ramosis 8-10 µ crassis composito; hyphopodiis capitatis numerosis, alternantibus, cellula superiore globosa vel ovata, 12 u diam., inferiore 5 µ longa; hyphopodiis mucronatis paucis, plerumque oppositis, ampulliformibus, usque ad 15 u longis; setis mycelicis 250 µ longis, 8-10 µ latis, erectis, rectis vel leviter curvatis, inferne atris, opacis, apicem versus septatis, obscure brunneis, obtusis; peritheciis paucis, minutis, 60-80 µ diam., globosis obscure brunneis, subopacis, tuberculatis; ascis non visis; sporidiis 4-septatis, ad septa constrictis, cylindraceis, utrinque late rotundatis, brunneis, 30-34 µ longis 12-15 µ latis.

Hab. in foliis Loranthi sp. (Loranthaceae), Catubing Riv. Ins. Philipp. (RAMOS). - A Mel. Loranthi Gaill. diversa.

127. Meliola arcuata Doidge, Trans. R. Soc. South Afr. V p. 737 t. 66 4469 fig. 37. - Coloniis minutis velutinis, 1-2 mm. diam.; hyphis ramoso-sinuosis, septatis, brunneis, 10-11 µ cr., demum anastomoticis; hyphopodiis capitatis, alternis, breviter stipitatis 20-30 × 10-11, cellula terminali ovoidea dentato-lobulata; hyphopodiis mucronatis parcis, oppositis, 14-18 > 7-9; setis mycelialibus numerosis, simplicibus, arcuatis rarius subrectis, nigris, opacis, apice acutis, 115-150 × 7-11; peritheciis nigris, granulosis, 115-150 μ diam.; ascis bisporis evanidis; sporidiis elliptico oblongis, utrinque rotundatis, 4-septatis ad septa leniter constrictis, 50-54 × 14 16.

Hab. ad caules Visci sp. (Loranthacoae), Kentami, Africae australis (PEGLER).

128. Meliola Magnoliae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4470 1916, p. 523, fig. 50.—Coloniis hypophyllis, irregularibus, 3-20 mm. diam., atris; mycelio 7 µ cr. laxe reticulato contexto; hyphopodiis capitatis alternis vel irregularibus, 45 µ circ. inter se distantibus, cellula capitata cylindracea, recta vel curvula, quam pedicello valde crassiore, obtusa, cellula basilari 8 µ circ. longa; hyphopodiis mucronatis oppositis vel sparsis, subcylindraceis vel anguste ampulliformibus, 20 µ longis; setis perithecialibus nullis, mycelialibus paucis, 700 µ circ. longis, rectis vel leniter curvis, opacis, apice acutis, simplicibus vel, raro, breviter furcatis; peritheciis 200 µ diam., leniter scabris, non ostiolatis; ascis cito diffluentibus; spo-

ridiis 4-septatis, atro-brunneis, arcte constrictis, obtusis, 51 × 20, Hab. in foliis Magnoliae portoricensis (Magnoliaceae), Monte Alegrillo. Porto Rico. — Ob hyphopodia haud perfecte evoluta, ramis mycelalibus brevibus subsimilia, species facile dignoscitur et primitiva in genere videtur.

129. Meliola diplochaeta Syd. in Leaflets of Philipp. Bot. V (1912) 4471 p. 1536. - Mycelio hypophyllo, plagulas aterrimas magnas discoideas 1-2 cm. latas velutinas efformante, ex hyphis fuscis laxiuscule ramosis 7-10 μ cr. composito; hyphopodiis mucronatis plerumque alternantibus, 24-28 µ longis; hyphopodiis capitatis clavatis, rectis vel curvulis, superne subinde irregulariter leniterque lobatis, 2-3-cellular:bus, 20-35 \* 10-15; setis mycelicis numerosissimis, praelongis, rectis vel subrectis, rigidulis, 1-1,75 mm. longis, 6-11 µ cr., prope basim abrupte geniculatis, opacis, apice 2-pluries inciso-furcatis vel denticulatis, dentibus plerumque brevissimis, raro haud furcatis; setis perithecialibus paucis, muito brevioribus, 250-500 µ tantum longis, etiam ad apicem furcatis: peritheciis in mycelio sparsis, globosis, in sicco collapsis, atris, 90-140 µ diam., rugulosis; ascis bisporis, ovatis, mox diffluentibus; sporidiis oblongis, utrinque rotundatis, 4-septatis, ad septa constrictis, obscure brunneis,  $50.56 \approx 22.24$ .

Hab. in foliis vetustis Talaumae villarianae (Magnoliaceae), Puerto Princesa, Palawan, ins. Philipp. — Ob setas myceliales perlongas, peritheciales contra multo breviores species peculiaris.

130. Meliola rectangularis Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4472 II, 1916, p. 495, fig. 25. — Coloniis epiphyllis, circularibus vel irregularibus, 1-10 mm. diam.; mycelio ex hyphis 7 μ diam., ramis oppositis typice rectangularibus praeditis, laxe contextis efformato; hyphopodiis capitatis alternis, circ. 25 μ inter se distantibus, cylindraceis vel ovoideis, cellula capitata 17 × 10, basilari 3-5 μ longa vix angustiore, hyphopodiis mucronatis alternis vel oppositis, e conoideis subampulliformibus, 20 × 6; rostro tenui; setis mycelialibus nullis, perithecialibus paucis, brevibus, 80 μ vel minus, opacis, apice obtusis, rectis vel leniter curvis; peritheciis 170 μ diam.; ascis mox evanidis; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis, 38 × 14.

Hab. in foliis Banisteriae laurifoliae (Malpighiaceae) et Coccolobae laurifoliae (Polygonaceae), Porto Rico 131 meliola Byrsonimae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4473 II, p. 517. — Coloniis epiphyllis circularibus vel irregularibus, 2-5 mm. diam.; mycelio ex hyphis laxe reticulato-contextis, 10 µ diam. efformato; hyphopodiis capitatis alternis, usque ad 1 0 µ distantibus, cylindraceis, 20 × 17, saepe irregularibus vel curvis, cellula basilari 3-5 µ longa; hyphopodiis mucronatis oppositis, ampulliformibus, 24 μ circ. longis; setis perithecialibus nullis, mycelialibus parcissimis, sparsis, rectis vel leniter curvis, 1000 µ longis, ubique fuscis, apice obtusis vel acutis; peritheciis 150-160 µ diam., levibus, in inventute areola myceliali cinctis; ascis mox evanidis; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis, 54 × 18.

Hab. in foliis Byrsonimae lucidae (Malpighiaceae), Guayanilla, Porto Rico. - M. amphitrichae, ambiguae et corallinae cognata sed distincta.

132. Meliola crenato-turcata Syd., Ann. Mycol. 14., 1916, p. 77. - Hypo- 4474 phylla, plagulas effusas irregulares tenues usque 2 cm. longas confluentes formans; mycelio radiante, dense adpresso, ex hyphis plus minus distincte rectangulariter ramosis fuscis 8-9 μ crassis composito; hyphopodiis capitatis numerosis, plerumque alternautibus, crasse cylindraceis, rectis vel curvatis, 18-24 µ longis, 10 µ latis, cellula basali minuta; setis mycelicis sat numerosis, erectis, rectis, obscure castaneo-brunneis, opacis, rarius superne subpellucidis, 300-350 \$8-10, apicem versus mox tantum crenatis, mox denticulatis vel potius 2-4 furcatis (dentibus usque 12 μ longis); peritheciis sparsis, globosis, astomis, 150-180 μ diam.; ascis 2-3-sporis; sporidiis crasse cylindraceis, utrinque obtusis 4-septatis, constrictis, 35 40 × 13.17.

Hab. in foliis Malpighiaceae, Seringal S. Francisco, Rio Acre, Brasiliae (E. Ule). - M. crenatissimae affinis.

133. Meliola Triumfettae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4475 II, 1916, p. 498. — Coloniis epiphyllis, punctiformibus, 1-3 mm. diam.; mycelio ex hyphis sinuosis, irregulariter ramosis, 6 µ cr., dense reticulato-intertextis composito; hyphopodiis capitatis minutis, alternis vel irregulariter distributis, 17-50 µ circ. inter se distantibus, cellula capitata globuloso-piriformi, 14 μ diam., basilari brevi; hyphopodiis mucronatis paucis, sparsis, alternis vel oppositis, phialiformibus, circ. 20 \* 7; setis mycelialibus nullis, perithecialibus paucis, 1.5, interdum sinuosis, 70-85 \* 6, flavis, pellucidis, apice obtusis; peritheciis irregulariter globosis, 85·140 μ diam., scabris, translucidis, papillulis conoideis conspersis; ascis mox evanidis;

sporidiis 4-septatis, brunneis, constrictis, obtusis, 34-41 \* 10-14.

Hab. in foliis H i b i s c i t i l i a c e i (Malvaceae) nec non Trium fettae semitrilo b a e (Tiliaceae), Porto Rico. — Specimina in Hibisco, mycelio magis undulato et colonias latiores efformante, setis perithecialibus quoad numerum magis variabilibus, a typo paullo recedunt.—Var. Vanderystii Beeli, Bull. Jard. Bot. État Bruxelles, v. 7., 1920, p. 100. — A typo differt setis perithecii majoribus,  $100 \approx 8.10$ , leniter torulosis, distincte uncinatis. Hab. in foliis Trium fettae sp. (Tiliaceae), Kikwit. Congo Africae trop. (VANDERYST).

134. Meliola Sidae Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of 4476 Sci. VIII (1913) p. 391. — M. microspora Rehm, Ascomyc. Philipp. I, loc. cit. p. 181, non Pat. et Gaill. — Mycelio plagulas arachnoideas, orbiculares, tenuissimas, nigrescentes, discretas, 1-3 mm. latas, raro confluentes, epiphyllas, in hypophyllo interdum crustaceas formante; hyphis centrifugis, subramosis, fuscis, 6-7  $\mu$  cr., hyphopodiis capitatis plerumque alternantibus, 2-cellularibus, apice ovoideis, interdum truncatis vel sublobulatis, 12-15  $\times$  10-12, hyphopodiis mucronatis plurimis oppositis, 15  $\times$  6-9 obsessis; peritheciis sparsis, globulosis, astomis, atris, verruculosis, 120  $\mu$  latis, ad basim setis singulis erectis, apice acutatis, septatis, obscure fuscis,  $200 \times 7$ -8, aliis erectis apice obtusis et dilutioribus, septatis, 60-100  $\times$  7-8 instructis; ascis ellipsoideis, 4-sporis,  $30 \times 15$ ; sporidiis oblongis, utrinque rotundatis, 4-septatis, ad septa subconstrictis, flavo-fuscis, 25-27  $\times$  9-10.

Hab. ad folia Sida e javensis (Malvaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER). — A M. microspora Patet Gaill. differt setis peritheciorum biformibus.

135. Meliola Marcgraviae L. R. Tehon, Bot. Gazette 67., 1919 p. 506.— 4477 Coloniis epiphyllis, irregularibus 3-10 mm diam., opposite ramosis, hyphis e obscuris opacis 5-6  $\mu$  diam.; hyphopodiis capitatis alternis, 32  $\mu$  inter se remotis, cellula apicali globosa 11  $\mu$  diam., basali brevi 5  $\mu$  longa; hyphopodiis mucronatis plerumque oppositis, sed frequenter etiam alternis, phyalaeformibus, 12-14  $\mu$  long., setis mycelicis et perithecialibus nullis; peritheciis sparsis, parvis, 65-75  $\mu$  diam.; ascis mox evanidis; sporidiis 4-septatis, pallide brunneis, cylindraceis, ad septa constrictulis,  $40 \approx 15$ .

Hab. in foliis Marcgraviae rectiflorae (Marcgraviaceae), Porto Rico.

136. Meliola Memecyli H. et P. Sydow, Ann. Mycol. XII, 1914, p. 198; 4478

XV, 1917, p. 189. — Amphigena, plagulas primitus orbiculares 3-5 mm. diam. dein confluentes et irregulares atras leniter velutinas formans; mycelio obscure brunneo, ex hyphis densiuscule septatis 9-11  $\mu$  latis breviter ramosis composito; hyphopodiis capitatis sat numerosis, semper alternantibus, oblongis v. crasse cylindraceis, 20-28  $\mu$  long. 10-15  $\mu$  latis, cellula superiore rotundata, inferiore plerumque brevi; hyphopodiis mucronatis non visis; setis mycelicis numerosis, rigidis, rectis v. subrectis, atris, opacis, septatis, ad apicem quandoque 2-3 ramosis plerumque paullo dilutioribus, 600-1000  $\mu$  long. inferne 9-12  $\mu$  latis; peritheciis laxe gregariis, atris, rugosis, astomis, in sicco collapsis, 160-250  $\mu$  diam.; ascis ovatis, bisporis, 50-65  $\times$  32-38; sporidiis ellipsoideis v. subcylindraceis, aut oblongis, utrinque rotundatis, 4-septatis et constrictis, obscure brunneis, 49-54  $\times$  19-24.

Hab. in foliis Memecyli edulis (Melastomataceae), Dapoli Indiae or. (S. L. AJREKAR) et M. lanceolati in Ins. Philippinis (RAMOS). — Mel. amphitrichae Fr. proxima, sed differt praecipue setulis mycelialibus multo longioribus

137. Meliola affinis Syd. in Leaflets of Philipp. Bot. VI (1913) p. 1921.— 4479 Mycelio hypophyllo, vix maculiformi, subeffuso, laxo, ex hyphis ramosis anastomosantibus, atris, opacis, 8-11 μ latis composito; hyphopodiis mucronatis raris, oppositis vel alternantibus, 18-26 μ longis; hyphopodiis capitatis magis numerosis, alternis, rectis vel curvatis, bicellularibus, 22-30 × 8-11; setis mycelicis rectis, erectis, rigidis, opacis, 300-700 × 10-15, biformibus; aliis simplicibus apice obtusis, aliis apice 2-3-furcatis, dentibus usque ad 10 μ longis; peritheciis paucis, globosis, rugulosis, 180-230 μ diam.; ascis ovatis, bisporis; sporidiis oblongis, utrinque rotundatis, 4-septatis, ad septa constrictis, fuscis, 38-44 × 13-16.

Hab. in foliis vetustis Memecyli urdanetensis (Melastomataceae), Cabadbaran, Mt. Urdaneta, Mindanao, ins. Philipp.— M. Mangiferae Earle valde affinis; differt praecipue sporidiis minoribus et constrictis.

138. Meliola Miconiae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4480 1916, p. 498, fig. 29. — Coloniis epiphyllis circularibus, 2.5 mm·diam., nitide limitatis atris, levibus; mycelio dense intertexto, ex hyphis 7 μ cr. plerumque opposite ramosis; hyphopodiis capitatis alternis vel irregularibus, haud crebris, 30 μ circ. inter se distantibus, cellula capitata piriformi, irregulari angulosaque, saepe curva, basilari 7-9 μ longa; hyphopodiis mucronatis non visis; setis my-

celialibus nullis, perithecialibus inconspicuis, paucis, 3-10, rectis vel leniter curvis, vel etiam convolutis, obtusis, 30 85  $\times$  10; peritheciis 170-225  $\mu$  diam., tenuiter papillulato-scabris; ascis tetrasporis, cito diffluentibus; sporidiis 4 septatis, brunneis, leniter constrictis, obtusis, 44-47  $\times$  17.

Hab. in foliis Miconiae prasinae (Melastomataceae), Las Piedras et Las Marias, Porto Rico.

139. Meliola miconicola Stev., Mel. Porto Rico, in III. Biol. Monogr. 4481 II, 1916, p. 491, fig. 19. — Coloniis hypophyllis, irregularibus, diffusis, 5-20 mm. diam.; mycelio laxissime reticulato ex hyphis leniter undulatis, 6 μ diam., ramis plerumque oppositis praeditis constituto; hyphopodiis capitatis minutis, alternis vel irregulariter distributis, inter se valde distantibus, circ. 75 μ, cellula capitata ovoidea vel piriformi, interdum paullo irregulari, 17 × 14, basilari 4-10 μ longa; hyphopodiis mucronatis paucis, sparsis, plerumque oppositis, phialiformibus, angustis, curvulis, 17 μ circ. longis; setis mycelialibus nullis, perithecialibus paucis, 3-10, basilaribus, plus minusve curvatis, 30-85 × 7, apice obtusis, fuscis; peritheciis 135 μ diam., papillis rotundatis asperatis; ascis mox evanidis; sporidiis 4-septatis, brunneis, constrictis, obtusis, 35-38 × 11.

Hab. in foliis Miconiae Sintenisii (Melastomataceae), El Alto de la Bandera, Porto Rico. — Mycelio sparso et hyphopodiis remotissimis distincta species.

140. Meliola Aglaiae Syd., Philipp. Journ. of Sc., v. 9., Sect. C., n. 2., 4482 1914, p. 159. — Amphigena, plagulas orbiculares minutas 2-4 mm. latas tenuissimas atras formans; mycelio hyphis radiantibus laxiuscule ramosis septatis fuscis 6-8 μ crassis composito; hyphopodiis capitatis sat numerosis, solitariis v. saepius in longa serie perfecte oppositis bicellularibus, oblongis, 12-16 μ longis, 7-8,5 μ latis, cellula basali brevi vel brevissima, superiore late rotundata; hyphopodiis mucronatis rarioribus, usque 18 μ longis; setis mycelicis numerosis, subrectis vel lenissime falcato-curvatis, 350-700 μ longis, inferne 7-9 μ crassis ad apicem acutis, inferne opacis, superne dilutioribus et pellucidis, septatis; peritheciis paucis in quaque plagula, globosis, 120-150 μ diam., vix verrucosis; ascis 2-3-sporis; sporidiis oblongis, utrinque late rotundatis, non vel vix constrictis, fuscis, 34-38 μ longis, 14-17 μ latis.

Hab. in foliis. Aglaiae sp. (Meliaceae), Palawan, Taytay, Ins. Philipp. (MERRILL).

141. Meliola Amoorae H. S. Yates, The Philipp. Journ. of Sc., Bot., 4483

13., 1918, p. 364. - Maculae epiphyllae, atrae subpelliculosae irregulares et magnam partem folii occupantes; mycelio abundante, ex hyphis laevibus brunneis radiantibus 7-8 μ cr. formato; ramis oppositis; hyphopodiis capitatis numerosissimis, oppositis, cellula superiore ovata, 9-10 μ longa, 6 μ lata, cellula inferiore 4-5 μ longa; hyphopodiis mucronatis ampulliformibus, irregularibus, usque ad 15 μ longis; setis paucis, rectis, erectis, opacis, acutis, 450-600 μ longis, ad basim 10 µ latis; peritheciis numerosis, globosis, atris. subopacis, 120-130 μ diam.; ascis ovatis 40 × 20, 4-sporis; sporidiis subcylindraceis, utrinque late rotundatis, 4-septatis, ad septa leviter constrictis, brunneis, 30 \* 12-15.

Hab. ad folia Amoorae (Meliaceae), Mount Binuang, Prov.

Tayabas Luzon, Ins. Philipp. (Ramos et Edaño).

142. Meliola banahaensis H. S. Yates, The Philipp. Journ. of Sc., Bot., 4484 13., 1918, p. 364. — Hypophylla, plagulas orbiculares 3-8 mm. diam. velutinas atras formans; mycelio ex hyphis densissime intertextis ramosis castaneo-brunneis 7.8 µ crassis formato; hyphopodiis capitatis alternantibus, cellula superiore ovata 12-15 µ diam., cellula inferiore brevi, 6-8 µ longa; hyphopodiis mucronatis paucis, irregularibus, ampulliformibus, usque ad 20 µ longis; setis mycelicis numerosissimis, rectis, erectis, ad basim geniculatis, tota longitudine opacis, 300-350 µ longis, 8-10 µ latis; ad apicem acutis vel bi-trifurcatis, dentibus 5-8 μ longis; peritheciis numerosis, 200-250 µ diam., atris, opacis; ascis 65-75 × 30, bisporis; sporidiis cylindraceis, utrinque late rotundatis, 4-septatis, ad septa constrictis, brunneis, 50-55 \* 19-21.

Hab. in foliis Dysoxyli (Meliaceae), Mount Banahao Prov.

Laguna Luzon, Ins. Philipp. (OCAMPO). 143. Meliola Guareae Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 4485 nos Aires XXIII p. 42 (1912). — Caespitulis epiphyllis, saepius confluenti-repandulis, 2-10 mm. diam., sublatiuscule fibrillosis, parcissime setulosis, siccando frustulatim deciduis, hyphis laxe intertextis, rectis; 10 μ cr., opposite ramosis, laxe patentimque hyphopodiatis; hyphopodiis 2-cellularibus, 20-25 \* 10, cylindraceis vel subclavulatis, alternis; rarissime ampulliformibus et oppositis, patentissimis vel leniter subretrorsis; setulis sparsis vel hine inde paucigregariis, erectis, rigidulis, acutissimis, 250-1000 \* 10, opace nigris; peritheciis e globoso depressis, 180-200 µ diam., coriacellis, astomis, vix papillatis; contextu opaco indistincto; ascis ellipsoideis, mox diffluentibus, bisporis; sporidiis cylindraceis, quadrisep-

tatis, ad septa non vel vix constrictis, utrinque late rotundatis,  $50 \times 20$ , loculis omnibus subaequalibus grosse 1-guttatis, e latere sat compressis 16 u tantum latis, obscure fuligineis.

Hab. in foliis vivis Guareae Balansae (Meliaceae), in silvis prope Puerto Leon, Misiones, Argentina.

144. Meliola guareicola Stev., Mel. Porto Rico, in III. Biol. Monogr. 4486 II, 1916, p. 521. — Coloniis epiphyllis, circularibus, punctiformibus, 1-4 mm. diam., atris; mycelio dense contexto, crustam facile separabilem efformante; hyphopodiis capitatis alternis vel irregularibus, crebris, cellula capitata globulosa, ovoidea vel piriformi,  $14 \times 10$ , basilari  $2\cdot 3 \mu$  longa; hyphopodiis mucronatis alternis vel oppositis, ampulliformibus, collo tenui,  $16\cdot 18 \times 7$ ; setis perithecialibus nullis, mycelialibus copiosis, colonias dense tegentibus,  $200\cdot 300 \times 7$ , fuscis, apice acuto pallidis, in parte superiore uncinatis vel contortis; peritheciis minutis,  $100\cdot 500 \mu$ , distincte ostiolatis; ascis mox evanidis; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis,  $37 \times 10$ .

Hab. in foliis Guareae trichilioidis (Meliaceae), Porto Rico. — M. Guareae saepe consociata, a qua setis uncinatis facile dignoscitur.

145. Meliola platysperma Theiss., Broteria, Bot., v. XII, 1914, fasc. I, 4487 p. 23. — Plagulae piceo-atrae, 4 mm. diam., orbiculares. Hyphae mycelii rubro-brunneae, opposite ramosae, 10 μ crassae, dense intertextae, cellulis ca. 25 μ longis. Hyphopodia capitata alterna, elongato-clavata, pedicellata, saepe unilateralia, 27 μ longa, supra 12-14 μ lata; hyphopodia mucronata typice opposita, ampulliformia, sinuose recurvata, continua. Setae myceliales atro-nitentes numerosae, basi geniculatae 10 μ crassae, rectae, apice obtusae, laetiores 5 μ crassae, integrae, 500-700 μ longae. Perithecia 250-280 μ diam., globulosa grosse verrucosa, atro-nitentia, aetate umbilicata, demum collapsa, cellulis polygoniis ca. 50 μ magnis, rubro-brunneis extus acute prominulis contexta. Asci 4-spori, maturitate ovato-piriformes, usque 90 × 75. Sporae brunneae, 4-septatae, utrinque rotundatae, vix constrictae, 50-56 × 24-28, cellulis aequalibus.

Hab. epiphylla in foliis Guareae (Meliaceae), S. Leopoldo, Brasiliae merid. (J. RICK).

146. Meliola opposita Syd. in Leaflets of Philipp. Bot. VI (1913) p. 4488
 1924. — Hypophylla, maculas aterrimas, velutinas, primo rotundatas, 3-10 mm. latas, saepe confluendo irregulares et multo majores efformans; mycelio ex hyphis ramosis, obscure fuscis, 7-10 μ

latis; septatis, composito; hyphopodus capitatis numerosissimis et confertis, plerumque oppositis, rarius alternis, bicellularibus, rectis vel leniter curvatis, fuscis, 17-22  $\mu$  longis, cellula basali brevi, superiore subglobosa, 9-12  $\mu$  lata; hyphopodiis mucronatis oppositis, ampulliformibus, 18-24  $\mu$  longis; setis mycelicis numerosissimis, rectis, erectis, rigidis, usque ad apicem opacis, apice acutis, 300-4000  $\star$  8-9; peritheciis numerosissimis, globosis, atris, 150-185  $\mu$  diam.; in sicco profunde collapsis, rugulosis; ascis ovatis, 2-3-sporis, 40-50  $\star$  20-25; sporidiis oblongis, utrinque rotundatis, 4-septatis, ad septa constrictis, fusco-brunneis, 34-38  $\star$  12-16.

Hab. in foliis vetustis Meliaceae cujusdam, Cabadbaran, Mindanao, ins. Philipp. — Hyphopodiis capitatis typice oppositis, setis copiosis, acutis, obscuris et peritheciis collapsis dense gregariis praecipue distincta.

147. Meliola parvula Syd. in Leaflets of Philipp. Bot. VI (1913) p. 4489
1925. — Mycelio hypophyllo, non vel parum maculiformi, subeffuso, laxo, ex hyphis longiusculis, ramosis, septatis, 5-6 μ crassis composito; hyphopodiis capitatis numerosis, oppositis vel alternantibus, pro ratione parvulis et gracilibus, 11-17 < 5-6, cylindraceis, rectis, apice semper rotundatis, cellula basali brevi; hyphopodiis mucronatis oppositis, usque ad 21 μ longis; setis mycelicis modice evolutis, rectis, erectis, rigidis, simplicibus, 300-700 > 7-9, inferne opacis, superne dilutioribus, apice acutiusculis; peritheciis laxe di spositis, globosis, parum tuberculatis, atris, 150-180 μ diam., in sicco collapsis, contextu e cellulis 9-11 μ diam. composito; ascis ovatis, 2-3-sporis, 35-40 > 22-30; sporidiis oblongis, utrinque obtusis, 4-septatis, ad septa constrictis, fuscis, 28-32 > 11-14.

Hab. in foliis vetustis Meliaceae cujusdam, Cabadbaran, Mindanao, ins. Philipp. — Hyphopodiis pro ratione gracilibus et sporidiis parvulis praecipue distincta.

148. Meliola Sandorici Rehm, Ascomyc. Philipp. III, in Philipp. Journ. 4490 of Sci. VIII (1913) p. 391. — Mycelio plagulas epiphyllas, velutinas, orbiculares, nigritulas, dispersas, 2-4 mm. latas formante; hyphis centrifugis, ramosis, fuscis, ad 8 μ latis, hyphopodiis capitatis alternantibus, oblongo-clavatis, crebris, 2-cellularibus, 12 × 6-8 et hyphopodiis mucronatis 15 × 7-8 obsessis; setis nullis; peritheciis in centro mycelii sparsis, globulosis, astomis, usque ad 150 μ diam., atris; ascis 2-sporis, 30 × 20; sporidiis oblongis, utrinque rotundatis, 4-septatis, flavo-fuscis, subconstrictis, 30 × 10-12.

Hab. ad folia Sandorici indici (Meliaceae), Luzon, Prov.

Laguna, Los Baños, ins. Philipp. (BAKER). — A M. Usteriana Rehm recedit hyphis elongatis sporidiisque constrictis.

149. Melicia sinuesa Doidge, Trans. R. Soc. South Afr. V, 1917, p. 735 4491 et 746, t. 64 fig. 33. — Amphigena, plerumque hypophylla, maculas, atras, velutinas, 1-5 mm. diam. efficiens; hyphis sinuosis, 5-11 μ crassis, interdum ad septa constrictis, cellulis 18-44 μ longis, raimis oppositis v. unilateralibus, saepe anastomosantibus; hyphopodiis capitatis alternis v. unilateralibus, 18-25 × 12-15, stipitatis, cellula superiore 14-15 μ long., forma varia subcylindrica, curvata v. sublobata, apice truncata v. convexa; hyphopodiis mucronatis raris, 14-15 × 10-16; setis mycelio numerosis, sparsis, erectis, simplicibus, 250-350 × 8-10, opacis; peritheciis sparsis, atris, globulosis, 160-220 μ diam.; ascis elliptico-ovatis, breviter pedicellatis, bisporis, sporidiis 4-septatis, cellula media majore, cylindricis, utrinque rotundatis, ad septa leniter constrictis, 50-55 × 15-18.

Hab. in foliis Trichiliae emeticae (Meliaceae), Lemana, Spelonken, Zoutpausberg Dist. Africa austr. (E. M. Doidge).

150. Meliola Trichiliae Beeli, Bull. Jard. Bot. État Bruxelles, v. 7., 4492 1920, p. 99. — Epiphylla, maculas irregulares parum conspicuas atro-griseas, 2-5 mm. diam., efformans; mycelio denso brunneo, hyphis rectis opposite ramosis 24-30 × 8; hyphopodiis capitatis numerosis, confertissimis oppositis raro alternis, cylindraceis, cellula superiori 20-25 × 12, basali 6-8 × 8; hyphopodiis mucronatis non visis; setis mycelicis numerosis, sparsis, opacis, rectis v. subrectis, septatis, simplicibus, apice pellucidis acutis, 300 × 10-12; peritheciis verrucosulis, leniter depressis, atris, 200 × 240 μ diam.; ascis evanidis; sporidiis 4-septatis, brunneis, cylindraceis, leniter constrictis, obtusis, 50-52 × 16-18.

Hab. in foliis Trichiliae retusae (Meliaceae), ad ripas Aruwimi, Congo Africae (BEQUAERT). — Proxima M. deciduae, parvulae, sinuosae.

151. Meliola leptochaeta Syd., Ann. Mycol. 15., 1917, p. 187. — Hypo- 4493 phylla, plagulas irregulares primitus minutas dein plus minus effusas saepe confluentes praecipue nervos sequentes atro-griseas formans; mycelium densissinum, ex hyphis copiose ramosis anastomosantibusque 6-9 μ crassis fuscidulis flexuosis vel torulosis formatum; hyphopodia modice copiosa, alternantia, oblonga, 12-19 μ longa, integra, cellula superiore 7-9 μ lata, inferiore brevi; hyphopodia mucronata rara, singularia vel opposita, 18-25 μ longa; setae mycelicae modice numerosae, graciles haud rigidae, 250-340 μ longae,

basi 7-9  $\mu$  latae, inferne atrae opacae, superne pellucidae, obtuse attenuatae, apicem versus saepe leniter flexuosae; perithecia sparsa, globosa, astoma, glabra, 150-200  $\mu$  diam.; asci 2-4-spori; sporae cylindraceae, 4-septatae, leniter constrictae, utrinque rotundatae, 35-42  $\approx$  12-14, cellulis aequalibus; conidia 4-cellularia, 30-38  $\mu$  longa, cellulis duabus mediis multo majoribus 9-10  $\mu$  latis obscurioribus, cellulis extimis appendiculiformibus pallidioribus multo minoribus angustioribusque.

Hab. in foliis Vavaeae spec. (Meliaceae), Rizal, Luzon Ins. Philipp. (H. S. YATES).

152. Meliola banguiensis H. S. Yates, The Philipp. Journ. of Sc., Bot., 4494
13., 1918, p. 365. — Amphigena, plerumque epiphylla, plus minus effusa, plagulas subarachnoideas, orbiculares, 0,3-2,0 cm. diam., vel confluentes efformans; mycelio modice evoluto, ex hyphis ramosis brunneis 7-8 μ diam. composito; hyphopodiis capitatis alternantibus, numerosis, cellula superiore ovata, 10-18 μ longa, 10-12 μ lata, cellula inferiore 5 μ longa; hyphopodiis mucronatis plerumque oppositis, ampulliformibus, 18-22 μ longis, setis mycelicis numerosis, 350-650 μ longis, 10-12 μ crassis, circa perithecia oriundis, erectis, rectis, simplicibus, atris, opacis, apicibus acutis; peritheciis numerosis, globosis, in sicco collapsis, 124-175 μ diam., tuberculatis; ascis ovatis, 6-8 sporis, 40 × 18. evanescentibus, sporidiis oblongis, 4-septatis, ad septa leviter constrictis, brunneis, 36-40 × 11-14.

Hab. ad folia Menispermaceae cujusdam, Bangui, Llocos Norte, Prov. Luzon, Ins. Philipp. (RAMOS).

153. Meliola Mollinediae Theiss., Broteria, Bot., v. XII, 1914, fasc. I, 4495 p. 24, fig. 4. — Epiphylla. Hyphae mycelii opposite ramosae rectilineae, cellulis elongatis, brunneolae, 6-8 μ crassae. Hyphopodia capitata distantia, alterna, 16-22 \* 10-12, pedicellata, capitulo plerumque recurvato et diverse lobato, rarius integro clavato; hyphopodia mucronata opposita, versiformia, lata basi sessilia, alia clavata integra vel subclavata, alia in collum brevissimum angustata vel demum longius producta, recta vel apice solum incurva vel sinuosa. Setae myceliales 300 μ longae, basi 8 μ crassae non geniculatae, apice longe attenuatae, acutatae. Perithecia ca. 200 μ diam., globulosa, plerumque sub basi setis mycelialibus circumdata, astoma, aetate collapsa parenchymatice contexta (cellulis polygoniis 10-15 μ cr., brunneis. in parte superiore, perithecii membrana exteriore obscuriore et crassiore, modice angulose prominulis). Asci

2-3-spori, elliptici,  $48-56 \approx 28-35$ ; sporae rectae, cylindricae, brunneae, 4-septatae,  $36-40 \approx 13-16$ , ad septa leniter constrictae, cellulis fere aequalibus.

Hab. in foliis Mollinediae (Monimiaceae), S. Leopoldo, Brasiliae meridionalis (J. RICK).

154. Meliola Artocarpi H. S. Yates, Philipp. Journ. Sc. Manila XII 4496 (1917) p. 362 (M. Artocarpiae). — Mycelio epiphyllo, plagulas atras, orbicularis, 3-5 mm. diam., ex hyphis sparsis brunneis septatis 8-10 μ crassis composito, ramis irregularibus; hyphopodiis capitatis numerosis, alternantibus vel irregularibus, cellula superiore globosa, 15 μ lata v. 24 × 18; hyphopodiis mucronatis, paucis, irregularibus, ampulliformibus, 15-17 μ longis; setis mycelicis numerosis, 350-500 μ longis, erectis, ad basim abrupte geniculatis et 10 μ crassis, inferne atris, superne obscure brunneis acutis vel obtusis; peritheciis numerosis, 100-200 μ diam., globosis opacis tuberculatis; ascis 2-4-sporis, 70-80 × 20-35; sporidiis brunneis, 4-septatis, cylindraceis, ad septa constrictis, utrinque late rotundatis 50-55 μ longis, 20-25 μ latis.

Hab. in foliis Artocarpi sp. (Moraceae), Catubing River, Samar, Ins. Philipp. (RAMOS).

155. Meliola microtricha Sydow, Ann. Mycol. 18., 1920, p. 157. — E- 4497 piphylla, plagulas primitus orbiculares velutinas dein confluendo irregulares 1-5 mm. diam. formans; mycelium densissime intertextum, ex hyphis suberectis vel undulatis dense breviterque ramosis septatis castaneo-brunneis 8-10 μ crassis compositum; hyphopodia capitata sat numerosa, alternantia, 20-25 μ longa, cellula apicali integra vel fere integra saepe irregulari 15-18 μ longa vel lata, cellula basali plus minus longiore et angusta; hyphopodia mucronata non visa; setae mycelicae copiosissimae, rectae vel subrectae, ad apicem attenuatae, tota longitudine opacae, simplices, 150-200 μ longae, basi 7-9 μ latae; setae peritheciales etiam numerosae, mycelicis similes, sed plerumque paullo breviores et saepe ad apicem obtusae et pellucide fuscae; perithecia numerosa, gregaria 140-180 μ diam.; asci bispori; sporae oblongae, utrinque obtusae, fuscae, 4-septatae, non vel vix constrictae, 40-43 × 15-18.

Hab. in foliis Fici albae (Moraceae), in insula Singapore, Straits Settlements, Asia (C. F. BAKER).

156. Meliola umirayensis H. S. Yates, The Philipp. Journ. of Sc., Bot. 4498
13., 1918, p. 370. — Maculas plerumque epiphyllas, atras, suborbiculares et 4-10 mm. diam., vel confluentes et magnam partem fo-

lii occupantes efformans; mycelio abundante, ex hyphis brunneis 6-8  $\mu$  composito; hyphopodiis capitatis numerosis, alternantibus, cellula superiore subglobosa vel lobata, 14-18  $\mu$  diam., cellula inferiore 12-16  $\mu$  longa, 5-6  $\mu$  lata; hyphopodiis mucronatis non visis; setis nullis; peritheciis paucis, 100-150  $\mu$  diam. atris, opacis; ascis bisporis 50  $\times$  20; sporidiis 3-septatis, ad septa constrictis, elongatis, utrimque late rotundatis, laeviter brunneis, 40-45  $\times$  12-14.

Hab. in foliis Fici (Moraceae), Umiray Prov. Tayabas, Luzon, Ins. Philipp. (RAMOS et EDAÑO).

157. Meliola Ficium H. S. Yates, The Philipp. Journ. of Sc., Bot., 13., 4499 1918, p. 368. — Epiphylla, maculas atras, suborbiculares, 4-8 mm. diametro vel aggregatas subpelliculosas efformans; mycelio ex hyphis intertextis radiantibus ramosis castaneo-brunneis 6-7 μ crassis formato; hyphopodiis capitatis numerosis, alternantibus, cylindraceis, cellula superiore ovata vel subglobosa, 10-12 μ diam.; cellula inferiore 4-5 μ longa; hyphopodiis mucronatis rarissimis, irregularibus, ampulliformibus, usque ad 20 μ longis; setis perithecii erectis, rectis vel leviter curvatis, atris, opacis, 500-600 μ longis, 15 μ latis, ad apicem acutis; peritheciis numerosis, globosis, tuberculatis, atris, opacis, 200-225 μ diam.; ascis bisporis, ellipsoideis, 45-50 × 15-30; sporidiis oblongis, 4-septatis, ad septa constrictis, brunneis, utrinque rotundatis, 45-50 × 15-18.

Hab. ad folia Fici sp. (Moraceae), Mount Banahao Prov. Laguna, Luzon, Ins. Philipp. (OCAMPO).

158. **Meliola Soroceae** Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4500 Buenos Aires XXIII p. 44 (1912). — Caespitulis amphigenis, plerumque vero hypophyllis, suborbicularibus, 2-10 mm. diam., submembranaceis, setulosis, arcte adnatis, numquam sponte deciduis; hyphis saepius alterne ramosis, 7-9 μ cr., flexuosulis; hyphopodiis alternis, antrorsis, cylindraceis vel subclavulatis, bicellularibus, 25-30 \* 9-12, fuligineis; setis erectis, leniter flexuosis, fuligineis, 200-350 \* 10, apice attenuatis ibique 2-3-lobulatis vel 2-3-fidis, denticulatis; peritheciis subglobosis, 150-250 μ diam., glabris, astomis, non collabentibus, fragillimis; ascis non visis; sporidiis cylindraceis, utrinque obtusissimis, e latere non compressis, 55 \* 20-22, quadriseptatis, vix constrictis, loculis omnibus aequalibus grosse 2-guttulatis.

Hab. in foliis vivis Soroceae ilicifoliae (Moraceae), in silvis propre Puerto Leòn, Misiones, Argentina.

159. Meliola Myrsinacearum Stev., Mel. Porto Rico, in Ill. Biol. Mo- 4501

nogr. II, 1916, p. 508. — Coloniis amphigenis, in epiphyllo copiosioribus, irregulariter circularibus, 1-10 mm. diam., confluentibus; mycelio atro dense reticulato-contexto, hyphis 10  $\mu$  cr. plerumque opposite ramosis; hyphopodiis capitatis alternis, unilateralibus vel irregulariter sparsis, non crebris, uno in quaque cellula, cellulis 34  $\mu$  circ. longis, cellula capitata subcylindrica vel anguste piriformi, 20  $\times$  14, basilari 2-4  $\mu$  louga; hyphopodiis mucronatis paucis, sparsis, alternis seu oppositis, ampulliformibus, 24  $\times$  10; setis perithecialibus nullis, mycelialibus paucis vel nullis in coloniis juvenilibus, in vetustis copiosis, rectis vel leniter curvis, 625 et ultra  $\mu$  longis, 10  $\mu$  cr., ubique fuscis, apice obtusis; peritheciis 200  $\mu$  diam., scabriusculis; ascis mox evanidis; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis, 51  $\times$  17-20.

Hab. in foliis Ardisiae guadalupensis (Myrsinaceae), et Myrsinaceae quaedam indeterm., Porto Rico. — M. amphitrichae affinis; differt structura hyphopodiorum capitatorum.

160. Meliola Groteana Syd., Ann. Mycol. XI, 1913, p. 402. — Mycelio 4502 amphigeno, radiante, maculas orbiculares 2-4 mm. latas saepe confluentes et majores parum velutinas efficiente, ex hyphis fuscis septatis ramosis 7-9 μ latis composito; hyphopodiis capitatis oppositis vel alternantibus, breviter stipitatis, cellula superiore ovoidea vel truncata, 12-17 μ longis; hyphopodiis mucronatis parce evolutis; setis mycelicis numerosissimis, simplicibus, rectis, rarius leniter curvatis, 220-325 μ longis, 7-9 μ latis, tota longitudine pellucidis, superne obtusis, remote septatis; peritheciis sparsis, globosis, astomis, atris, 140-200 μ diam., leniter rugulosis; ascis ovatis, 2-3-sporis, 45-60 ≈ 23-28; sporidiis oblongo-cylindraceis, utrinque late rotundatis, 4-septatis, ad septa saepe valde constrictis, fuscis, 40-46 ≈ 14-17.

Hab. in foliis Maesae lanceolatae (Myrsinaceae), Amani, Africa or. trop. (Grote). — Meliolae strychnicolae Gaill. affinis.
161. Meliola Maesae Rehm, Ascomyc. Philipp. III, in Philipp. Journ. 4503 of Sci. VIII (1913) p. 392. — Mycelio hypophyllo plagas velutinas, orbiculares, atras, 0,5-2 cm. latas late arachnoideo-marginatas formante; hyphis mycelialibus ramosis, subcurvatis, fuscis, 7-9 μ cr., hyphopodiis capitatis 2-cellularibus, ovoideo-elongatis, rectis vel subcurvatis, 15 × 7-8, alternantibus vel oppositis, hyphopodiis mucronatis oppositis, raris, 15 × 6 obsessis; setis mycelialibus ad basim curvatis, erectis, apice acutatis, obscure fuscis, circ. 250 × 8-9; peritheciis globulosis, astomis, haud verrucosis, in centro mycelii

sparsis, 150  $\mu$  circ. diam.; ascis ovoideis, bisporis, 30  $\star$  20; sporidiis oblongis, utrinque obtusis, 5-cellularibus, haud constrictis, flavo-fuscis, 20  $\star$  9-10.

Hab. ad folia et ramos vivos Maesae laxae (Myrsinaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKEE). — Affinis M. Telosmae Rehm, a qua differt hyphis undulatis et hyphopodiis omnino diversis.

162. Meliola peregrina Syd., Enum. Philipp. Fungi II, in Philipp. 4504
Journ. of Sci. VIII (1913) p. 479. — Amphigena, maculas atras minutissimas <sup>1</sup>/<sub>s</sub>-1,5 mm. diam. discoideas formans; mycelio ex hyphis radiantibus, ramosis, longiusculis, castaneo-brunneis, septatis, 7-9 μ crassis formato; hyphopodiis capitatis innumeris, densissime stipatis, alternantibus, obscure brunneis, 12-17 × 10-12, cellula superiore late rotundata, inferiore brevi; hyphopodiis mucronatis rarissimis; setis nullis; peritheciis plerumque solitariis in quaque macula, rotundatis, applanatis, atris, ostiolatis, 200-300 μ latis, contextu opaco indistincte hyphoideo; ascis ovatis, bisporis, 45-54 × 25-35; sporidiis oblongis, utrinque late rotundatis, 4-septatis, ad septa constrictis, obscure fuscis, 34-41 × 12-16.

Hab. in foliis vivis Maesae laxae (Myrsinaceae), Luzon, Prov. Nueva Vizcaya, ins. Philipp. — M. clavisporae Pat. habitu subsimilis.

163. Meliola furcillata Doidge, Trans. R. Soc. South Afr. V, 1917, p. 738 4505 et 747, t. 65 f. 39. — Amphigena, maculas tenues atras, 2-3 mm. diam. efficiens; hyphis rectis v. sinuosis, fuscis, 6-8 μ crassis, cellulis 18-21 μ long. compositis, ramis oppositis v. alternis v. unilateralibus, breviter stipitatis 18-21,5 μ long., cellula superiore ovata recta, incurvata v. recurvata 10,5-12,5 × 7-9, hyphopodiis mucronatis inter hyphopodia capitata intersparsis, 14-18 μ long., ampullaceis, collo longiore plerumque curvato; setis mycelicis prope perithecia congregatis, 330-400 × 7, basi opacis semel v. bis abrupte geniculatis, superne rectis, rigidis, pellucidis, plus minusve torulosis, prope apicem leniter constrictis, apice mucronatis v. 2-3 dentatis; peritheciis sparsis v. subaggregatis, atris globosis, verrucosis, 160-180 μ diam.; ascis 2-sporis; sporidiis, 4-septatis, cylindricis, utrinque, rotundatis, ad septa constrictis, 43-45 × 16-18.

Hab. in foliis Maesae rufescentis (Myrsinaceae), Amauzimtoti, Natal, Africa austr. (E. M. DOIDGE).

164. Meliola parathesicola Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4506 II, 1916, p. 492, fig. 20. — Coloniis hypophyllis, irregulariter circularibus, punctiformibus, 1-2 mm. diam., mycelio brunneo contextum compactum efformante, hyphis 8  $\mu$  diam. irregulariter ramosis, hyphopodiis capitatis alternis vel sparsis, creberrimis, inter se adjacentibus, cellula capitata ovoidea vel subglobulosa, interdum leniter angulosa, 20 × 14, basilari 3·7  $\mu$  longa; hyphopodiis mucronatis paucis, sparsis, alternis seu oppositis, ampulliformibus, 20 × 7; setis mycelialibus nullis, perithecialibus paucis, 1-5, basilaribus, rectis, circ. 90 × 7, apice obtusis, ubique fuscis; peritheciis 135-150  $\mu$  diam., papillis latiusculis conoideis asperatis; ascis mox evanidis; sporidiis 4-septatis, brunneis, cylindraceo-ellipsoideis, leviter constrictis, obtusis, 48 × 20.

Hab. in foliis Parathesis serrulatae (Myrsinaceae), Porto Rico. — Affinis M. mayapaeicolae; differt setis perith. et structura hyphop. capitatorum.

165. Meliola Linocierae H. et P. Sydow, Ann. Mycol. XII, 1914, p. 550. 4507 Epiphylla, plagulas minutas primo orbiculares 2-5 mm. diam. dein irregulares confluentes leniter velutinas atras formans; mycelio ex hyphis densissime intertextis breviter ramosis copiose anastomosantibus castaneo-brunneis 6-8 µ crassis tormato; hyphopodiis capitatis numerosis, alternantibus v. saepe dense approximatis, crasse cylindraceis, integris, 16-22 × 10, cellula superiore ovata, basali brevi; hyphopodiis mucronatis oppositis, usque 26 μ long.; setis mycelicis numerosissimis, rectis, simplicibus, ad apicem acutis, atris tota longitudine opacis, 150-200 \* 5-8; peritheciis sparsis, minutis, 70-100 \( \mu\) diam., astomis; ascis 2-3 sporis; sporidiis ellipsoideo-oblongis v. oblongis, 4-septatis, constrictis, castaneo-brunneis, 32-38 \* 14-18; hyphis conidiophoris simplicibus, dilute fuscis, copiose septatis (articulis 20-25 μ long.) toruloso flexuosis, 4-6 μ crassis; conidiis fusiformibus, basi rotundatis, ad apicem flagellatis, 3-septatis, non constrictis, dilute fuscis, 24-38 × 6-8.

Hab. in foliis Linocierae Cumingianae (Oleaceae), Antipolo prov. Rizal Ins. Philippin. (M. RAMOS).

166. Meliola tayabensis H. S. Yates, Philipp. Journ. Sc. Manila XII 4508 (1917) p. 369. — Hypophylla, maculas atras, orbiculares 1-2 cm. diam., saepe confluentes et irregulares, dein plus minusve totam superficiem folii obtegentes; mycelio ex hyphis obscure brunneis rectis septatis irregulariter ramosis 6 μ latis composito; hyphopodiis capitatis numerosis, alternantibus cellula superiore subglobosa circiter 10 μ lata, inferiore 6-7 μ longa; hyphopodiis mucronatis irregularibus, ampulliformibus, usque ad 17-20 μ longis, setis my-

celicis numerosis, 250-300 µ longis, 8-10 µ latis, erectis, rectis vel leviter curvatis, atris, opacis, apice simplicibus, acutis vel obtusis; peritheciis paucis globosis, glabris, atris, opacis, 150-200 µ diam., in sicco collapsis; ascis evanescentibus; sporidiis 4-septatis, fuscis, cylindraceis, utrinque late rotundatis, ad septa leviter constrictis,  $40.50 \times 14.16$ .

Hab. in foliis Linocierae sp. (Oleaceae), Basiad, Prov. Tayabas Luzon, Ins. Philipp.

167. Meliola Mayepeae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4509 II, 1916, p. 596, fig. 46. - Coloniis amphigenis, plerumque vero epiphyllis, circularibus, 1-5 mm. diam.; mycelio atro densiuscule reticulato, hyphis 7 μ cr., ramis oppositis, saepius angulum acutum efformantibus; hyphopodiis capitatis minutis, alternis, non confertis, uno pro cellula, cellulis 35 µ c. longis, cellula capitata obovoidea 10 × 7, basilari 3 μ longa; hyphopodiis mucronatis non visis; setis perithecialibus nullis, mycelialibus paucis vel copiosis, circa perithecia saepe abundantibus, leniter curvis, circ. 250 × 6, ubique fuscis, apice simplici obtuso; peritheciis 170 µ diam., scabris; ascis cito diffluentibus; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis, 30 35 × 17.

Hab. in foliis Mayepeae domingensis (Oleaceae), Mavaguez Mosa et El Alto de la Bandera, Porto Rico. - A M. brasiliensi distinguitur forma hyphopodiorum capitat. et basi setarum.

168. Meliola mayepeicola Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4510 II, 1916, p. 519. — Coloniis epiphyllis, circularibus, punctiformibus, 1-2 mm. diam.; mycelio atro, hyphis 9 μ crassis, ramis plerumque oppositis, dense reticulato-contextis; hyphopodiis capitatis latis, alternis, crebris, uno pro cellula, cellulis 20 μ circ. longis, cellula capitata piriformi, 24 × 17, basilari 7 μ longa; hyphopodiis mucronatis paucis, alternis vel oppositis, phialiformibus, curvulis, angustis, 16-18 \* 6; setis perithecialibus nullis, mycelialibus paucis, rectis vel leniter curvatis, 150 \* 7, ubique fuscis, apice obtusis; peritheciis 100-119 µ diam., ob papillulas conoideas scabris; ascis cito diffluentibus; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis,  $34 \times 14$ .

Hab. in foliis Mayepeae domingensis (Oleaceae), Mayaguez Mesa et Maricao, Porto Rico. — A M. Mayepeae, cui saepe socia, etiam nudo oculo dignoscitur.

169. Meliola Opiliae H. et P. Sydow, Ann. Mycol. XI, 1913, p. 327, - 4511 Maculas amphigenas velutinas orbiculares minutas 2-3 mm. latas

dein plus minus confluentes atras efformans; hyphis ramosis, obscure brunneis, septatis, 7-9  $\mu$  crassis; hyphopodiis capitatis numerosissimis, semper exacte oppositis v. suboppositis, clavatis, regularibus, 16-18  $\mu$  long., cellula superiore late rotundata, inferiore multo breviore; hyphopodiis mucronatis rarioribus, oppositis, ampulliformibus, 17-20  $\mu$  long.; setis mycelicis numerosis, rigidis, erectis simplicibus, apice obtusis v. dentatis aut 2-3-furcatis (dentibus usque 10  $\mu$  long.), obscure brunneis, 200-280  $\mu$  long., 10-11  $\mu$  cr.; peritheciis numerosis, aggregatis, globosis, 175-210  $\mu$  diam., vix tuberculatis; ascis ellipticis v. ovatis, 3-4 sporis, 40-48  $\times$  19-24; sporidiis oblongis, utrinque rotundatis, 4-septatis, ad septa constrictis, obscure brunneis, 36-42  $\times$  10-16.

Hab. in foliis Opiliae amentaceae Roxb. (Opiliaceae), Bolampatty valley Coimbatore Madras Pres., Indiae or. (C. E. C. FISCHER). — Socia Asterina crebra H. Syd.

170. Melicia Livistoniae H. S. Yates, Philipp. Journ. Sc. XII (1917) 4512 p. 366. — Hypophylla, plagulas aterrimas, velutinas, orbiculares, 3-5 cm. diam.; mycelio laxo, ex hyphis irregulariter ramosis obscure brunneis septatis 6-7 μ crassis ex peritheciis radiantibus composito; hyphopodiis capitatis paucis, alternantibus vel irregularibus, numquam oppositis, cellula superiore irregulariter lobata, circiter 15-25 μ diam., cellula inferiore saepe curvata 20-25 μ longa; hyphopodiis mucronatis paucis, ampulliformibus, usque ad 20 μ longis, setis mycelicis numerosissimis, 300-350 μ longis, 8-9 μ latis, erectis, rectis vel leviter curvatis, opacis, acutis vel 2-3 denticulatis, dentibus 5-6 μ longis; peritheciis globosis, opacis, atris, tuberculatis, 175-250 μ diam.; ascis evanescentibus; sporidiis oblongis, 4-septatis, ad septa leviter constrictis, brunneis, utrinque late rotundatis, 50-55 × 12-22.

Hab. in foliis Livistonae sp. (Palmae), Basiad, Tayabas, Luzon, Ins. Philipp.

171. Meliola incompta Sydow, Ann. Mycol. 18., 1920, p. 98. — Epi- 4513 phylla, plagulas primitus orbiculares dein confluendo irregulares tenues variae magnitudinis formans; mycelium densissime reticulatum, ex hyphis brevibus copiosissime ramosis anastomosantibusque septatis castaneo-brunneis 6-8 μ crassis compositum; hyphopodia capitata numerosissima, opposita vel unilateralia, cellula superiore globosa vel subglobosa integra ca. 12 μ alta 10 μ lata, cellula inferiore brevissima saepe vix conspicua; hyphopodia mucronata multo rariora usque 24 μ longa; setae myceliales copiosae,

rectae, ad apicem acutae, tota longitudine opacae vel superne pellucidae, simplices, 350-600  $\mu$  longae, inferne 10-12  $\mu$  crassae; perithecia laxe gregaria, 80-110  $\mu$  diam.; asci 2-3-spori, fugaces; sporae cylindraceae, 4-septatae, leniter constrictae, utrinque rotundatae,  $38.42 \times 12.$ 

Hab. in foliis Phytolaccae dininae (Phytolaccaceae), Los Baños, Ins. Philippin. (F. CLARA).

172. **Meliola Gaillardiana** Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4514 II, 1916, p. 529, fig. 55. — Coloniis epiphyllis, minutis, circularibus, 1-2 mm. latis, atris; mycelio irregulari, undulato, densissime re ticulato contexto, ramis 9  $\mu$  cr., cellulis 14  $\mu$  circ. longis; hyphopodiis capitatis parvis, alternis vel sparsis, crebris, 7-17  $\mu$  interse distantibus, ovoideis, piriformibus vel curvatis, 10  $\mu$  diam., cellula basilari 5-6  $\mu$  longa; hyphopodiis mucronatis paucis, sparsis, alternis vel oppositis, phialiformibus, rostro tenuiusculo; setis mycelialibus copiosis, rectis, rigidis,  $220 \times 10$ , opacis, apice cristam minute spinulosam 17-34  $\mu$  latam, interdum furcatam gerentibus; peritheciis 170  $\mu$  diam., leniter scabris, papillulis vix 6  $\mu$  altis, ostiolo nullo; ascis mox evanidis; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis, loculis terminalibus longioribus,  $14 \times 3$ .

Hab. in foliis Piperis aduncti (Piperaceae), Porto Rico. — Ob setas apice cristatas perdistincta species.

173. Meliola paucipes Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4515 1916, p. 510, fig. 40. — Coloniis amphigenis, plerumque hypophyllis, irregularibus, sparsis, diffusis, 5-10 mm. diam., mycelio ex hyphis 7  $\mu$  cr., irregulariter ramosis laxe contextis composito; hyphopodiis capitatis alternis vel irregularibus, inter se distantibus, 70-100  $\mu$ , ovoideis vel piriformibus, saepe angularibus, cellula capitata 17 \* 14, basilari 4  $\mu$  circ. longa; hyphopodiis mucronatis plerumque alternis, ampulliformibus; setis mycelialibus nullis, perithecialibus sparsis, longissimis,  $700 \times 10$ , rectis, simplicibus, apice obtusis; peritheciis 160  $\mu$  diam., leniter scabris, non ostiolatis; ascis evanescentibus; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis,  $37 \times 14$ .

Hab. in foliis Piperis blattarum (Piperaceae), Mayaguez Mesa, Porto Rico. — Setis mycelialibus elongatis et hyphopodiis remotis praecipue dignoscenda.

174. Meliola contorta Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4516 1916, p. 500 fig. 30. — Coloniis amphigenis, plerumque hypophyllis, irregulariter circularibus, 16 mm. diam., atris; mycelio laxiuscule

reticulato-contexto, hyphis 7 µ diam., plerumque opposite ramosis: hyphopodiis capitatis latis, alternis copiosis sed non confertis, ovoideis v. ellipsoideis uno pro cellula, cellulis 35 µ circ. longis, cellula capitata 17 × 10, apice obtusa, basilari 7 μ circ. longa; hyphopodiis mucronatis oppositis, alternis vel sparsis, phialiformibus collo tenui; setis mycelialibus paucis, sparsis, perithecialibus similibus; setis perithecialibus apice varie incurvis vel uncinatis. sat copiosis ad basim peritheciorum, 150 × 10 circ., apice varie configuratis, nunc leniter attenuatis et papillis lateralibus copiosis acutiusculis praeditis, nunc uncinatis asperulis, nunc breviter dichotomis, ramis apice breviter dentatis; peritheciis 140 µ diam. leniter scabris, non ostiolatis; ascis mox evanidis; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis, 34-37 \* 10.

Hab. in foliis Piperis hispidi (Piperaceae), Las Marias. Porto Rico.

175. Meliola piperina Syd., Ann. Mycol., 14., 1916, p. 358. — Amphigena, 4517 plerumque hypophylla, maculas minutas 1-3 mm. atras formans: mycelio repente, ex hyphis longis rectangulariter ramosis fuscis remote septatis, articulis 20-35 μ longis 18-10 μ crassis formato: hyphopodiis capitatis numerosis, alternantibus vel unilateralibus, plus minus longe stipitatis, cellula apicali valde lobata, fere nunquam integra, saepe depressa, hinc latiore quam altiore, 20 µ lata et 18 µ alta, cellula basali (stipite) mox brevi, mox usque 10 µ longa; hyphopodiis mucronatis plerumque oppositis, in collum longum abeuntibus, usque 24 µ longis; setis mycelicis numerosis, aterrimis, tota longitudine opacis, apice acutis, 300-500 µ longis, basi 10-12 μ latis, rectis vel rectiusculis; peritheciis paucis aggregatis, 120-170 μ diam., parum tuberculatis; ascis 2-3 sporis; sporidiis cylindraceis, utrinque rotundatis, 4-septatis, parum constrictis, brunneis, 32-36 - 10-11.

Hab. in foliis Piperis sp. (Piperaceae), Los Baños, ins. Philipp. (C. F. BAKER). - Mel. stenosporae affinis.

176. Meliola Osmanthi Sydow, Ann. Mycol. 18., 1920, p. 157. — Epi- 4518 phylla, plagulas primitus orbiculares 3-5 mm. diam. dein irregulares plus minus confluentes aterrimas formans; mycelium ex hyphis densissime intertextis valde breviterque ramosis septatis castaneis 68 µ crassis compositum; hyphopodia capitata copiosissima, densissime gregaria, alternantia vel opposita, semper integra, plerumque ovata, 18-20 µ longa, cellula superiore 9-11 µ lata; setae myceliales copiosae, rectae, simplices, tota superficie opacae, 250-

300 μ longae, basi 8-10 μ crassae, ad apicem acutae; perithecia gregaria, 170-250 µ diam., ob cellulas protuberantes verrucosa; asci nondum maturi.

Hab. in foliis Osmanthi aquifolii (Pirolaceae), Bando, Tokushima, ins. Shikoko, Japoniae (B. KRUG).

177. Meliola Elmeri Syd. in Leaflets of Philipp. Bot. V (1912) p. 1537. - 4519 Amphigena, mycelio plagulas circulares 1-3 mm. latas, atras, velutinas efformante, ex hyphis densissime intertextis et valde ramosis, anastomosantibus, 8 10 µ cr., obscure fuscis composito; hyphopodiis alternis, capitato-clavatis, 12-18 \* 8-11; setis mycelicis numerosis, rigidis, rectis vel subrectis, simplicibus, opacis, 200-250 µ longis, 6-9 µ cr.; peritheciis laxe aggregatis, atris, globosis, in sicco collapsis, non vel vix rugosis, 130-160 µ diam.; ascis 2-sporis, ovatis, 50 × 35; sporidiis oblongis, 4-septatis, leniter constrictis, utrinque rotundatis, fuscis, 42-50 × 14-17.

Hab. in foliis Pittospori pentandri (Pittosporaceae), Brooks Point, Palawan, ins. Philipp.

178. Meliola tenuissima Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4520 II. 1916, p. 492. - Amphigena sed in hypophyllo magis copiosa; coloniis tenuissimis, nudo oculo inconspicuis ex hyphis undulatis, 7 u diam., laxe reticulatis efformatis; hyphopodiis capitatis tenuibus, alternis, distantibus, cellula capitata globosa, ovoidali vel piriformi, non angulosa, 10 μ diam., basilari 3 μ circ. longa: hyphopodiis mucronatis paucis, alternis vel oppositis, ampulliformibus, 20 μ longis; setis mycelialibus nullis, perithecialibus paucis, 3 4, rectis, curvatis, vel etiam uncinatis, 100 × 6, apice obtusis ibique interdum inflatis; peritheciis 170 µ diam., leviter scabris; ascis mox evanidis; sporidiis 4-septatis, brunneis, obtusis, ad septa haud constrictis,  $34.37 \times 14.15$ .

Hab. in foliis Gouaniae lupuloidis (Rhamnaceae), Yauco et Villa Alba, Porto Rico. - Species exiguitate mycelii fere unica.

179. Meliola Scutiae Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 4521 nos Aires XXIII p. 43 (1912). - Caespitulis saepius epiphyllis, parvis, orbicularibus, 1-3 mm. diam., obsolete concentrice zonatis, e membranaceo subcrustaceis, subvelutinis, aterrimis; hyphis ramulosis, rectis, 6-9 µ cr., opposite ramosis, fuligineis; hyphopodiis patentissimis, oppositis, 2-cellularibus, 14-30 × 8-9, e cylindraceo subclavulatis, saepe leniter retrorsum arcuatis; setulis praecipue circa perithecia evolutis, rectis, obtusiuscule acutatis, integerrimis, 200-300 × 7-10, apice pellucidis, ceterum opacis; peritheciis subglobosis

200-400 μ diam., centro caespitulorum insidentibus, glabris, astomis, collabescentibus, nigris; ascis non visis; sporidiis subcylindraceis, utrinque obtuse rotundatis, fuligineis, 36-38 × 16, e latere altero convexulis quadriseptatis, loculis omnibus grosse 1-guttatis.

Hab. in foliis vivis Scutiae buxifoliae (Rhamnaceae), in nemoribus prope Santa Cornelia, Jujuy: Argentina.

180. Meliola Chiococcae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4522 II, 1916, p. 495, fig. 26. — Coloniis epiphyllis, irregularibus, circularibus, 1-5 mm. diam., mycelio atro, laxe reticulato, 7 μ diam., ramis plerumque oppositis et rectangularibus; hyphopodiis capitatis alternis, non crebris, 1 pro cellula, cellulis 20 μ circ. longis, cellula capitata irregulariter globulosa, angulosa, 17 μ diam., basilari 2-6 μ longa; hyphopodiis mucronatis non visis; setis mycelialibus nullis, perithecialibus paucis, rectis vel leniter curvis, 120 × 7, apice obtusis, fuscis; peritheciis 170 μ diam., scabriusculis; ascis mox evanidis; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis, 37-41 × 14.

Hab. in foliis Chiococcae albae (Rubiaceae), Vega Baja et Hormigueros, Porto Rico.

181. Meliola microspora Pat. et Gaill. — Syll. IX p. 426 — var. afri. 4523 cana Doidge, Trans. R. Soc. South Afr. V, 1917, p. 746, t. 63 fig. 29. — Hyphopodiis capitatis, 20-21 \* 7-8, cellula sup. ovata 14-16 μ longa; sporidiis 26-32 \* 10,5-14.

Hab. in foliis Galopinae circaeoidis (Rubiaceae), Woodbush, Afric. merid.

182. Meliola Ixorae H. S. Yates, Philipp. Journ. Sc. Manila XII (1917) 4524 p. 365 (M. Ixoriae). — Amphigena, maculas atro-griseas, orbiculares vel irregulares, 5·15 mm. diam., saepe confluentes formans; mycelio abundante, ex hyphis septatis flexuosis brunneis 5·8 μ cr. composito; ramis oppositis vel irregularibus; hyphopodiis capitatis numerosis, alternantibus vel unilateralibus, cellula superiore lobata vel rotundata 12·16 μ longa 10·15 μ lata; inferiore 5·12 μ longa, 6 μ lata; hyphopodiis mucronatis paucis, oppositis vel irregularibus, ampulliformibus, 12·14 μ longis; setis mycelicis 600·750 μ longis, 8·10 μ latis, erectis, rectis vel leviter curvatis, saepe ad basim geniculatis, inferne opacis, atris, simplicibus, acutis; setis perithecialibus circ. 8 ad basim quoque perithecii; peritheciis globosis, atris, opacis, tuberculatis, 100·125 μ diam.; ascis, 2·4·sporis 55·65 μ longis, 20·26 μ latis; sporidiis oblongis, utrinque rotundatis, 4·septatis, ad septa non constrictis, saepe leviter curvatis,

40 μ longis, 14 μ latis.

Hab. in foliis Ixorae philippinensis (Rubiaceae), Manila, Ins. Philipp.

183. Meliola Mitragynes Syd., Enum. Philipp. Fungi II, in Philipp. 4525 Journ. of Sci. VIII (1913) p. 478. — Mycelio amphigeno, plerumque vero epiphyllo, tenuiter effuso, laxo, ex hyphis longiusculis; parce ramosis, fusco-brunneis, 7.9 μ cr. composito; hyphopodiis capitatis numerosis, alternantibus, ovatis vel oblongis, rectis vel leniter curvatis, 12-17 × 9-13, cellula basali minuta, superiore globosa; hyphopodiis mucronatis, plerumque oppositis, ampulliformibus, usque ad 26 μ longis; setis mycelicis numerosis, simplicibus, rectis vel leniter curvatis, apice acutis, inferne opacis, apicem versus plus minusve dilutioribus, 300-425 × 7-9; peritheciis sparsis, globosis, atris, glabris, 150-180 μ diam., in sicco collapsis; ascis ovatis, bisporis, 44-50 × 25-30; sporidiis cylindraceis, 4-septatis, ad septa leniter constrictis, utrinque late rotundatis, obscure brunneis, 35-42 × 14-16.

Hab. in foliis vivis Mitragynes diversifoliae (Rubiaceae), Luzon, Prov. Nueva Vizcaya, ins. Philipp.

184. Meliola palawanensis Syd. in Leaflets of Philipp. Bot. V (1912) 4526 p. 1539. — Mycelio amphigeno, plagulas discoidales vel irregulares, minutas, 2-4 mm. diam., saepius confluentes efformante, ex hyphis fuscis, densiuscule ramosis, 6-9 μ crassis composito; hyphopodiis capitatis numerosis, bicellularibus, 16-20 × 10-12, clavatis vel irregularibus; hyphopodiis mucronatis alternantibus vel oppositis, usque ad 16 μ longis; setis mycelicis rectis, erectis, rigidis, simplicibus, 175-250 × 7-9, opacis, apice acutis; peritheciis in mycelio sparsis, globosis, vix rugulosis, atris, 160-180 μ diam.; ascis ovatis, 2-3-sporis, fugacibus; sporidiis oblongis, utrinque rotundatis, 4-septatis, vix vel leniter constrictis, fuscis, 32-36 × 10-12.

Hab. in foliis vetustis Morindae Bartlingii (Rubiaceae), Puerto Princesa, Palawan, ins. Philipp.

185. Meliola Mussaendae Syd., Ann. Mycol. 15., 1917, p. 190. — Amphi- 4527 gena, praecipue epiphylla, plagulas arachnoideas tenues irregulares primo minutas 1-2 mm. diam. dein confluentes effusas plus minus confluentes et saepe totam folii superficiem occupantes formans; mycelium ex hyphis brunneis 7-9 μ crassis septatis ramosis compositum; hyphopodia capitata sat numerosa, piriformia, alternantia, 15-22 μ longa, cellula superiore globulosa vel ovata 10-12 μ lata semper integra, inferiore brevi stipitiformi; hyphopodia mucronata

copiosa, alternantia vel opposita, lageniformia, usque 22  $\mu$  longa, basi 7-9  $\mu$  lata; setae tantum ad basim peritheciorum evolutae, rectae vel subrectae, 170-250  $\mu$  longae, ad basim 7-9  $\mu$  crassae, sursum 6 7  $\mu$  crassae, summo apice late rotundatae et plerumque etiam leniter dilatatae, simplices vel etiam superne semel furcatodivisae (ramis erectis brevibus vel usque 25  $\mu$  longis obtusis); perithecia sparsa vel laxe gregaria, globosa astoma, in sicco collapsa, 120-160  $\mu$  diam., asci 2-3-spori; sporae oblongae, 4-septatae, leniter constrictae, fuscae, utrinque rotundatae, 26-35  $\approx$  11-13.

Hab. in foliis Mussaendae philippicae (Rubiaceae), Laguna et Los Baños, Luzon, Ins. Philipp. (M. RAMOS).

186. Meliola mayaguesiana Stev., Mel. Porto Rico, in Ill. Biol. Mo- 4528 nogr. II, 1916, p. 500, fig. 31. — Coloniis amphigenis, plerumque hypophyllis, circularibus, 2-8 mm. diam.; mycelio atro densiuscule reticulato-contexto, hyphis 7 μ cr., irregulariter ramosis, contortis. intricatis; hyphopodiis capitatis minutis, alternis, non crebris, 1 pro cellula, cellulis 40 μ circ. longis, cellula capitata ovoidea vel truncata, apice saepe incrassata, 17 × 10, basilari e brevissima 7 μ usque longa; hyphopodiis mucronatis paucis et sparsis, angustis, alternis, ampulliformibus, 27 × 7; setis perithecialibus paucis, 3-10, circ. 100 × 7, ubique atris, contortis, plerumque spiraliter convolutis, interdum glomerulatis, apice obtusis; setis mycelialibus copiosis, rectis vel leniter curvis, longissimis, circ. 800 × 9, fuscis, simplicibus; peritheciis 150 μ diam., ob papillas conoideas scabris; ascis 2-4-sporis; sporidiis 4-septatis, pallide brunneis, angustis, leniter constrictis, obtusis, 48-51 × 7-9.

Hab. in foliis Policoure ae sp. plur. (Rubiaceae), Mayaguez, Piedras, alibique in Porto Rico. — Species notis variis facile dignoscenda.

187. Meliola falcata P et H. Syd., Ann. Mycol. X, 1912, p. 37. — Am- 4529 phigena, plerumque epiphylla, velutina, atra, plagulas orbiculares 2-4 mm. latas saepe confluentes et tunc irregulares efformans; peritheciis intra setas myceliales numerosissimas absconditis, globosis, verrucosis, atris, 200-230 μ diam.; mycelio ex hyphis fuseis anastomosantibus, 6-7 μ er., composito; hyphopodiis mucronatis oppositis 15-18 μ long., capitatis alternantibus 22-25 μ long. cellula apicali usque 10 μ lata; setis mycelicis simplicibus, curvatis, saepe falcatis, opacis 175-250 × 6-9; ascis 2-4-sporis; sporidiis oblongis, utrinque rotundatis, 4-septatis, constrictis, fuscis, 38-48 × 16-20.

Hab. in foliis Plectroniae ventosae (Rubiaceae), Ama-

nyimtote, Natal (E. M. DOIDGE).

188. Meliola glabra Berk. et Curt. — Syll. I p. 63.— var. Psychotriae 4530 Stevens, Meliola Porto Rico in Illin. biol. Monogr. II, 1916, p. 482.— Coloniis nunc minutis, mycelio mox ramoso et dense reticulato fere ut in typo, nunc magis extensis et laxis, a typo valde recedentibus.

Hab. in foliis Psychotriae, Palicoureae, Coccocypseli (Rubiaceae), Porto Rico.

189. Meliola bayamonensis L. R. Tehon, Bot. Gazette, 67., 1919, p. 506.— 4531 Coloniis hypophyllis 2-5 mm. diam., mycelio laxe reticulato, ramulis alternis; hyphis obscuris 4 μ cr. undulatis; hyphopodiis capitatis alternis 30-60 μ inter se remotis, cellula apicali e globosa ovoidea 8·10 μ diam., basali variabili 6·16 μ longa; hyphopodiis mucronatis paucis, alternis, 14 μ long.; setis mycelicis nullis, perithecialibus 5·7, decumbentibus e obscure brunneis opacis, 225 × 4·5, apice acutis; peritheciis sparsis rugosis 100-135 μ; ascis mox evanidis sporidiis 4-septatis, 27-30 × 7, ad septa constrictulis.

Hab. in Psychotria pubescenti (Rubiaceae), prope Bayamon, Porto Rico. — A M. glabra var. Psychotriae setis perithecialibus praesentibus, a M. Psychotriae Earle habitu et conformatione hyphopodiorum praecipue diversa.

190. Meliola maquilingiana Syd., Ann. Mycol. 15., 1917, p. 188.—Amphigena, saepius epiphylla plagulas tenues primitus minutas 2-3 mm. diam. dein plus minus effusas arachnoideas formans; mycelium rectangulariter ramosum, ex hyphis castaneo-brunneis 7-8 μ crassis rectis compositum; hyphopodia capitata modice copiosa, alternantia 15-18 μ longa, semper integra, cellula superiore globulosa vel ovata 10-12 μ lata, basali minuta, setae micelii modice copiosae, rectae, simplices, apice late rotundatae, 140-250 μ longae, 6-8 μ crassae, tota longitudine opacae vel rarius superne pellucidae; perithecia laxe aggregata, globosa, 140-170 μ diam. in sicco collapsa; asci 2-3 spori; sporae oblongo-cylindraceae, 4-septatae, vix vel leniter constrictae, utrinque rotundatae, 27-32 × 11-13, brunneae.

Hab. in foliis Psychotriae spec. (Rubiaceae), Mt. Maquiling, Laguna, Ins. Philipp. (C. F. BAKER).

191. Meliola Bakeri Syd., Ann. Mycol. 14., 1916 p. 355. — Amphigena  $^{4533}$  vel ramulicola, plagulas minutas 1.3 mm. longas subvelutinas atras formans; mycelio denso, ex hyphis ramosis fuscis 7.10  $\mu$  crassis anastomosantibus composito; hyphopodiis capitatis copiosis, alternantibus vel oppositis, 16-22  $\mu$  longis, cellula superiore plerumque

ovata vel ovato-globosa semper integra 8-11  $\mu$  lata, inferiore semper breviore; setis mycelicis copiosissimis, rectis vel subrectis apice lanceolato-acutis; aterrimis, tota longitudine opacis, 250-400  $\mu$  longis, basi 9-12  $\mu$  latis; peritheciis gregariis globosis, in siceo collapsis, parum tuberculatis, 160-200  $\mu$  diam.; ascis 2-3-sporis, fugacibus; sporidiis cylindraceis, 4-septatis, non vel parum constrictis, brunneis, utrinque rotundatis, 38-42  $\times$  10-15.

Hab. in foliis Tetrastigmatis sp. (? Rubiaceae, an Vitaceae?), M. Maquiling ins. Philipp. (C. F. BAKER).

192. Meliola anceps Syd., Ann. Mycol. 14., 1916, p. 76.— Hypophylla, 4534 plagulas irregulares usque 1 cm. longas subinde confluentes atras formans; mycelio ex hyphis longis rectis vel rectiusculis fuscis 7-8  $\mu$  crassis composito; hyphopodiis capitatis alternantibus, 15-20  $\times$  10-12, integris, late rotundatis, cellula basali brevi; hyphopodiis mucro atis non visis, setis mycelicis numerosis, praesertim perithecia circumdantibus, rectis vel leniter curvatis, 170 250  $\mu$  longis, 7-9  $\mu$  latis, atris, opacis, apicem versus dilutioribus et pellucidis, septatis, ad apicem plerumque late rotundatis vel lenissime etiam dilatatis, saepe etiam ad apice lenissime denticulatis vel potius verrucosis raro bifidis (dentibus brevibus usque 5  $\mu$ , rarissime longioribus); peritheciis sparsis, globosis, astomis, haud tuberculatis, 140-160  $\mu$  diam., ascis 2-3-sporis; sporidiis cylindraceis, late rotundatis, fuscis, 4-septatis, parum constrictis, 24-27  $\times$  10-14.

Hab. in foliis Uncariae guyanensis (Rubiaceae), Seringal S. Francisco, Rio Acre, Brasiliae (E. ULE).

193. Meliola Uncarias Rehm, Ascomyc. Philipp. V, Leaflets of Phi-4535 lipp. Botany VI (1914) p. 2192. — Maculis epiphyllis, sparsis, discoideis, distincte marginatis, tenuibus, nigritulis, 2-3 mm. latis, ex hyphis centrifugis, rectis, parce ramosis, brevicellularibus, fuscis, 6 μ latis contextis; hyphopodiis capitatis 2-cellularibus, brevissime stipitatis, 15-20 μ altis, cellula superiore ovoideo-globosa 12 μ lata, plerumque oppositis raro solitariis, itemque hyphopodiis uncinatis, 12 × 6-7, fuscis; setis nullis; peritheciis 2-5 in media parte macularum, atris, vix verruculosis, demum umbilicatis, glabris, 150 μ diam.; ascis ellipsoideis, bisporis; sporidiis oblongis, rectis, 4-septatis, utrinque rotundatis, non constrictis fuscis, 30 × 10-12.

Hab. ad folia Uncariae Perrottettii (Rubiaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

194. Meliola monensis Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4536 1916, p. 506, fig. 35. — Coloniis plerumque epiphyllis atris, minu-

tis, 1-2 mm. latis, punctiformibus, mycelio densissime reticulato-contexto, hyphis ramosis, undulatis, 7  $\mu$  cr.; hyphopodiis capitatis alternis vel oppositis, crebris; cellulis mycelialibus 20  $\mu$  circ. longis; cellula capitata irregulariter lobata, 17  $\mu$  circ. diam., basilari 7  $\mu$  circ. longa; hyphopodiis mucronatis paucis, sparsis, alternis vel oppositis, phialiformibus, collo tenui, saepe curvulo, 20  $\mu$  longis; setis perithecialibus nullis, mycelialibus copiosis, rectis, rigidis, atris, simplicibus, 400  $\times$  10-14, apice obtusis; peritheciis 250  $\mu$  diam., leniter scabris; ascis 78  $\times$  38, mox diffluentibus; sporidiis 4-septatis, pallide brunneis, leniter constrictis, obtusis, 45-55  $\times$  20-22.

Hab. in foliis Amyridis elemiferae (Rutaceae), Mona Island et Guayanilla, Porto Rico. — Species structura coloniarum et hyphopodiorum capit. perdistincta.

195. Meliola citricela Syd., Ann. Mycol. 15., 1917, p. 183.—Amphigena, 4537 plagulas primitus plus minus orbiculares 2.5 mm. diam. tandem saepe effusas et subinde totam folii superficiem obtegentes formans: mycelium ex hyphis valde ramosis opace brunneis 7-9 µ crassis septatis irregularibus subinde torulosis compositum; hyphopodia capitata numerosa, alternantia vel subinde opposita, plerumque oblonga, ovata vel piriformia 18-22 μ longa, cellula superiore 8-11 μ lata, semper integra, cellula basali minuta; hyphopodia mucronata etiam numerosa, opposita, 20-25 µ longa, acutata, basi 8-10 µ lata; setae myceliales numerosae, tota longitudine opacae, atrae, 500-700 μ longae, basi geniculatae et 10-12 µ crassae, rectae vel subrectae, ad apicem 2-4-denticulatae vel breviter furcatae, dentibus mox minutissimis, mox longioribus (usque 15 μ); perithecia sparsa, globosa, 130-160 μ diam., astoma; asci evanidi; sporae cylindraceae vel oblongae, utrinque rotundatae, 4-septatae, leniter constrictae, fuscae, 35-42 > 14-18, loculis fere aequalibus.

Hab. in foliis Citri prob. C. nobilis et Citri sp. (Rutaceae), San Antonio, Laguna et Rizal Luzon, Ins. Philipp. (RAMOS et H. S. YATES).

196. Meliola Harana Trotter. — Meliola citricola K. Hara, Journ. A- 4538 gric. Soc. Shidzuoka Prefect. (« Shidzuokaken Nôkwaihô »), n. 263, 1919, p. 8, cum tab., nec Sydow — Tanaka, Mycologia, 12., 1920, p. 332. — Hyphis juvenilibus filiformibus tenuibus, ramosis, septatis hyalinis v. pallide coloratis, 2,5-3 μ cr., maturis crassioribus torulosis obscure brunneis, quandoque nucleatis 4-7 μ cr.; articulis seu chlamydosporis ellipsoideis v. subglobosis 8-15 × 4-7; conidiis Triposporiioideis stellatis 6-4 brachyatis 2-4 septatis, 40-60 μ cr.;

peritheciis globosis v. globoso-depressis, 200-230  $\mu$  cr., membrana nuda, subparenchymatica carbonacea fragili, obscure brunnea, cellulis 6-12  $\mu$  cr.; ostiolo apicali non prominente, orbiculari, 15-20  $\mu$  lato; ascis obovatis, globosis v. ellipsoideis, apice rotundatis, basi pedicellatis crasse tunicatis, octosporis aparaphysatis, 40-70 \* 30-40; sporidiis ellipsoideis v. subfusoideis utrinque attenuatis rectis v. curvis 6-7 transverse septatis saepe etiam longitudinaliter, hyalinis 28-45 \* 7-12. — Ob sporidia hyalina potius ad gen. Limaciniam adscribenda et tunc Lim. Harana Trott. vocanda.

Hab. in foliis, ramis fractibusque Citri sp. (Rutaceae), Shidz-noka-ken, Japonia.

197. Meliola Butleri Syd., in Syd. et Butl. Ann. Mycol. IX, 1911., 4539 p. 379. — Amphigena, plerumque epiphylla; mycelio rugoso-crustaceo, maculas orbiculares atras 2-4 mm. latas v. plagas effuso-confluentes formante; hyphis fusco-brunneis, 7-8 μ crassis; hyphopodiis capitatis oppositis v. alternantibus, 15-20 μ long., cellula superiore 9-10 μ cr., mucronatis oppositis et usque 20 μ long.; setis opacis, 200-500 μ long., 10-11 μ cr., ad apicem 2-4 furcatis; peritheciis numerosis, lenticulari-sphaeroideis, 150-220 μ diam.; ascis fugacibus, 2-sporis; sporidiis cylindraceis, utrinque rotundatis, quadriseptatis, leniter constrictis, fusco-brunneis, 33-40 × 13-17; mycelio conidiophoro velutino, ex hyphis erectis superne valde sinuosis (ut in Meliola zig-zag) composito; conidiis triseptatis, fusoideis, apice hyalino-papillatis vel attenuatis, 21-46 × 6-11.

Hab. in foliis Citri medicae var. acidae (Rutaceae), Chittagong, Indiae or. (R. SEN), Citri decumanae, Kyain Amherst Distr., Burma, Indiae or. (E. J. BUTLER). — A M. amphitricha setis furcatis imprimis diversa.

198. Meliola Galipeae Syd., Ann. Mycol. 15., 1917, p. 77.— Hypophylla, 4540 plagulas orbiculares, 3-8 mm. diam., atras, velutinas formans; mycelio ex hyphis obscure fuscis 8-9 μ crassis composito; hyphopodiis capitatis numerosissimis, 20-25 μ longis, 10-12 μ latis, integris cellula superiore ovata, inferiore brevi, setis mycelicis numerosis simis, rectis vel parum curvatis, basi saepe geniculatis, tota longitudine opacis vel ad apicem subpellucidis, 220-360 μ longis, 9-10 μ crassis, ad apicem 2-4-furcatis (dentibus erectis variabilibus 3-14 μ longis); peritheciis sparsis, globosis, astomis, tuberculatis, 250-300 μ diam.; ascis bisporis; sporidiis cylindraceis, utrinque obtusis, 4-septatis, parum constrictis, fuscis, 42-48 × 12-17, loculis subaequalibus.

Hab. in foliis Galipeae longiflorae (Butaceae), Seringal S. Francisco Rio Acre, Brasiliae (E. ULE).

199. Meliola cadigensis H. S. Yates, Philipp. Journ. Sc. Manila, XII 4541 (1917) p. 363. — Hypophylla, maculas atras 5-8 mm. diam., dein confluentes et plus minusve effusas efformans; mycelio ex hyphis septatis 6-7 μ diam. obscure brunneis composito, ramis oppositis vel irregularibus; hyphopodiis capitatis numerosis, oppositis vel irregularibus, cellula superiore rotundata, 12-14 μ longa, 10 μ lata, inferiore 5 μ longa; hyphopodiis mucronatis numerosis, ampulliformibus, usque ad 20 μ longis; setis mycelicis numerosissimis, erectis, ad basim geniculatis, 450-550 μ longis, 10 μ crassis, atris opacis; peritheciis numerosis in quaque macula, globosis, tuberculatis, 130-170 μ diam.; ascis non visis; sporidiis cylindraceis, utrinque late rotundatis, 4 septatis, ad septa constrictis, obscure brunneis, 35-40 μ longis, 14-16 μ latis.

Hab. in foliis Glycosmis cochinchinensis (Rutaceae)
Mt. Cading, Tayabas Prov. Luzon, Ins. Philipp.

200. Meliola patens Syd. in Leaflets of Philipp. Bot. V (1912) p. 1538.— 4542 Mycelio hypophyllo, plagulas velutinas, aterrimas, magnas, 1-2 cm. longas, discoideas vel irregulares saepeque confluentes efformante, ex hyphis varie ramosis et intertextis, obscure brunneis, 5-8 μ cr. composito; hyphopodiis capitatis alternis, bicellularibus, rectis vel curvulis, 16 22 × 10-12, cellula superiore ovoidea vel oblonga, rotundata, vix lobata; hyphopodiis mucronatis alternis vel oppositis, ca. 20-22 μ longis; setis mycelicis numerosissimis, rectis, erectis, rigidulis, 300 μ usque longis, 8-10 μ crassis, opacis, superne in ramos duos patentes longos (80-150 μ) leniter incurvatos divisis; ramis iterum semel vel bis in ramulos longiusculos (40-120 μ) ad apicem plus minusve longe 2-4-furcatos divisis; peritheciis globosis, rugosis, atris, 200 250 μ diam.; ascis bisporis mox diffuentibus; sporidiis oblongis, utrinque rotundatis, 4-septatis, ad septa constrictis, fusco-brunneis, 38-45 × 15-18.

Hab. in foliis Lunasiae amarae (Rutaceae), Puerto Princesa, Palawan, ins. Philipp. — Affinis imprimis M. leptideae Syd.
201. Meliola Pilocarpi Stev., Mel. Porto Rico, in Ill. Biol Monogr. 4543 II, 1916, p. 509. — Coloniis hypophyllis, irregularibus, 4-15 mm. diam., atris, mycelio laxe reticulato, ramis oppositis vel alternis, 8 μ diam.; hyphopodiis capitatis alternis, raro oppositis, non crebris, uno pro cellula, cellulis 20-30 μ longis, cellula capitata cylindrica vel leniter incrassata, 20 × 10, basilari brevi; hyphopodiis

mucronatis plerumque oppositis, ampulliformibus, rostro saepe curvulo, 20 \* 7; setis perithecialibus nullis, mycelialibus paucis, sparsis, rectis, atris,  $1100~\mu$  longis, basi  $10~\mu$  cr. apice acutatis; peritheciis  $190~\mu$  diam.; ascis cito diffluentibus; sporidiis 4-septatis, brunneis, valde constrictis, obtusis, 51-54 \* 17-20.

Hab. in foliis Pilocarpi racemosi (Rutaceae), Mayaguez, Porto Rico.

202. Meliola Toddaliae Doidge, Trans. R. Soc. South Afr. V, 1917, 4544 p. 732 et 746, t. 63, fig. 28. — Amphigena, maculas atras velutinas 2-3 mm. diam. efficiens; hyphis fuscis, ramosis 7-10 μ crassis, cellulis 18-25 μ longis, ramis plerumque oppositis, anastomosantibus, hyphopodiis capitatis numerosis, oppositis 18-20 μ long., stipitatis, cellula superiore subovata et leniter curvata, saepe compressa, 14-16 × 8-11; hyphopodiis mucronatis non numerosis, simplicibus, rectis demum opacis, plus minusve torulosis, 300-350 × 8-10; peritheciis sparsis, in setis mycelicis absconditis, atris, globulosis, verrucosis, 200-250 μ diam.; ascis 3-4-sporis; sporidiis 4-septatis, leniter constrictis, cylindricis, utrinque rotundatis, compressis, 47-55 × 18-21 × 14.

Hab. in foliis Toddaliae lanceolatae (Butaceae), Kentani, Africa austr. (A. PAGLER).

- 203. Meliola obesa Speg. Syll. IX p. 421. Huc ducenda, teste 4545 ipso cl. Spegazzini (Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII p. 43), M. obesula Speg.—Syll. XI p. 262 quae tantum statum senescentem sistit. In Rutaceis.
- 204. Meliola Champereiae H. et P. Sydow, Ann. Mycol. XII, 1914, 4546 p. 549. Amphigena, plerumque hypophylla, plagulas minutas orbiculares 2-4 mm. latas aterrimas velutinas formans; mycelio ex hyphis dense intricato-ramosis fuscis 7-9 μ cr. composito; hyphopodiis capitatis numerosissimis, alternantibus v. saepe etiam perfecte oppositis, ovato-oblongis, 20-26 × 10-14, cellula superiore ovata rotundata vel rarius lenissime lobulata, inferiore brevi; hyphopodiis mucronatis raris; setis mycelicis numerosissimis, lanceolatis, apice acutis, rectis v. curvatis, 350-470 × 8 11, tota longitudine opacis, atris, crasse tunicatis; peritheciis parcis, globosis, astomis, 130-160 μ diam., ascis ovatis, bisporis; sporidiis oblongis v. oblongo-cylindraceis, utrinque late rotundatis, fuscis, 4-septatis, parum constrictis, 38-44 × 15-18.

Hab. in foliis Champereiae manillanae (Santalaceae), Antipolo prov. Bizal, Ins. Philipp. (M. RAMOS).— Mel. stenosporae

Wint. proxima.

205. Meliola Exocarpi H. S. Yates, The Philipp. Journ. of Sc., Bot. 4547 13., 1918, p. 368 (M. Exocarpiae). — Amphigena, plagulas orbiculares, 2-8 mm. diam., atras formans; mycelio abundante, ex hyphis castaneis tortuosis anastomosantibus 6-8 μ diam. composito; hyphopodiis capitatis numerosis, alternantibus, cellula superiore globosa vel subglobosa et 18-22 μ diam., cellula inferiore 10-18 μ longa, 10-12 μ lata, hyphopodiis mucronatis rarissimis, irregularibus, ampulliformibus, usque ad 22-24 μ longis; setis mycelicis numerosis, rectis, erectis, atris, opacis, vel ad apicem brunneis, apicibus obtusis, 200-250 μ longis, 10-12 μ latis; peritheciis paucis, globosis, verrucosis, atris, opacis, 140-160 μ diam.; ascis non visis; sporidiis cylindraceis, utrinque late rotundatis, 4-septatis, ad septa constrictis, brunneis, 50-55 × 15-20.

Hab. ad folia Exocarpi latifolii (Santalaceae), Prov. Llocos Norte, Luzon Ins. Philipp. (RAMOS).

206. Meliola Colladoi Syd., Ann. Mycol. 18., 1920, p. 98. — Epiphylla, 4548 plagulas primitus minutas sed mox confluentes irregulares tenues formans; mycelium ex hyphis 7-9 μ erassis septatis ramosis compositum; hyphopodia capitata copiosa alternantia, oblonga, 14-18 μ longa, obtusa, integra, superne 7-9 μ lata; hyphopodia mucronata non visa; setae myceliales sat numerosae, rectae, simplices, pellucide brunneae, ad apicem obtusae, 4-6-septatae, 300-600 \* 5-7; perithecia gregaria, 100-150 μ diam., in sicco collapsa; asci 2-3-spori; sporae oblongae, 4-septatae, vix vel leniter constrictae, utrinque obtusae, 26-34 \* 10-12.

Hab. in foliis Aryterae spec. (Sapindaceae), Mt. Maquiling, prov. Laguna Ins. Philippin. (T. Collado).

207. Meliola Cupaniae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4549 II, 1916, p. 497, fig. 28. — Coloniis epiphyllis, irregularibus, 2-10 mm. diam., confluentibus, diffusis; mycelio plerumque opposite ramoso, laxissime intertexto, 7 μ crasso; hyphopodiis capitatis alternis, 37-70 μ inter se distantibus, cellula capitata ovato-cuneata, aequali vel angulosa, saepe truncata, basilari 7 μ longa; hyphopodiis mucronatis oppositis, ampulliformibus vel conoideis, 20 μ circ. longis; setis mycelialibus nullis, perithecialibus 3-12, rectis vel curvis, apice obtusis, fuscis, 140 \* 5; peritheciis 110-170 μ diam., ob papillulas rotundatas scabris; ascis cito evanidis; sporidiis 4-septatis, brunneis, cylindraceis, leniter constrictis, obtusis, 37 \* 14.

Hab. in foliis Cupaniae americanae et Cup. sp. (Sapindaceae), Porto Rico. — Mycelio sparso, hyphopodiis distantibus, longis, angustis praecipue distincta species.

208. Meliola araneosa Syd. in Leaflets of Philipp. Bot. VI (1913), 4550 p. 1922. - Mycelio epiphyllo, maculas parum conspicuas, 2-7 mm. latas, saepe confluentes et totum folium occupantes formante, laxo. araneoso, ex hyphis elongatis parum ramosis, flexuosis, 4,5-6 µ cr. composito; hyphopodiis capitatis numerosis, alternantibus, continuis vel cellula brevissima stipitiformi plerumque vix conspicua suffultis, cellula superiore perfecte globosa vel subglobosa, 9-11 u altis et latis, haud lobatis nec truncatis; hyphopodiis mucronatis alternis vel oppositis, lageniformibus vel subampulliformibus, 18-22 µ longis, rectis; setis mycelicis nullis; peritheciis laxe dispositis, globosis, 110-150 µ diam., in sicco collapsis, contextu e cellulis 9-11 μ longis composito, setulis paucis usque ad 100 μ longis, 8-9 μ crassis, 2-4-septatis, dilute fuscis, rectis vel subrectis, simplicibus, apice late rotundatis obsitis; ascis ovatis, 2-3-sporis; sporidiis oblongis, 4-septatis, ad septa constrictis, utrinque obtusis, fuscis, 35-38 \* 11-15.

Hab. in foliis vetustis Guioae microcarpae (Sapindaceae), Cabadbaran, Mindanao, ins. Philipp. — M. aciculosae Wint. valde proxima sed hyphopodiis alienis.

209. Meliola lepisanthea Sacc., Notae Mycol. XXIII p. 61 (Accad. Ven. 4551 Trent. 1917). — Plagulis epiphyllis, raro hypophyllis, irregularibus, confluentibus et maculas 1-3 cm. formantibus, ex olivaceo nigricantibus; hyphis radiantibus, ramosis, fuligineis, utrinque hyphopodiis capitatis typicis praeditis; hyphopodiis mucronatis non observatis; peritheciis globulosis, astomis, 90-110 μ diam., contextu fuligineo; sporidiis cylindraceis, utrinque rotundatis, 4-septatoconstrictis, 30-38 × 10-11,5, badio-fuligineis; setis copiosis interspersis, cuspidatis, curvatis, 250-300 × 7, obsolete septatis aterrimis, basi saepe bulbillosis.

Hab. in foliis Lepisanthis sp. (Sapindaceae), Los Baños, Ins. Philipp. — Est e typo Mel. amphitrichae sed sporidia minora etc. Adest supra Meliolam, verisimiliter parasiticum, Stemphylium muriculatum, de quo cfr. suo loco.

210. Meliola Hessii Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4552 1916, p. 527, fig. 52. — Coloniis epiphyllis, irregulariter discoidalibus, 2-3 mm. diam., in senectute centro denudatis; mycelio rectiusculo, dense reticulato-contexto, ramis plerumque oppositis, 7 μ

diam.; hyphopodiis capitatis oppositis, crebris, 17  $\mu$  circ. inter se distantibus, cellula capitata piriformi 10 × 7, basilari 3  $\mu$  longa; hyphopodiis mucronatis oppositis, ampulliformibus; setis perithecialibus nullis, mycelialibus erectis, rigidis, non vere copiosis, sat uniformibus, 190 × 8, apice 1-2-3-dichotomo-ramosis, ramis brevibus, subrectangularibus, 15  $\mu$  circ. longis; peritheciis 150  $\mu$  diam., minute scabris; ascis cito diffuentibus, 4-sporis; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis, 41 × 14.

Hab. in foliis Paulliniae pinnatae (Sapindaceae), Sabano-Llana et Mayaguez, Porto Rico.

211. Meliola Stevensii Beeli, Bull. Jard. Bot. État Bruxelles, v. 7., 4553 1920, p. 98. — Amphigena, maculas orbiculares nigras velutinas 5-15 mm. diam. efformans; mycelio radianti, hyphis brunneis copiose ramosis, pallide brunneis, 30-36 × 7-8; hyphopodiis capitatis alternis v. unilateralibus 14-22 × 12, cellula superiori subglobosovata, inferiori brevi; hyphopodiis mucronatis oppositis; setis mycelicis numerosis sparsis supra mycelium et sub peritheciis positis, brunneis pellucidis, rectis septatis simplicibus ad apicem obtusis, 240-300 × 5-6; peritheciis numerosis verrucosis atris, depresso-niduliformibus obscure branneis, 150 μ diam., circa centrum macularum positis; ascis evanescentibus; sporidiis 4-septatis brunneis cylindraceis ad septa constrictulis, apice obtusis v. parum attenuatis, 34-35 × 12-15.

Hab. in foliis Sapindaceae cujusdam, Wombali, Congo, Africa trop. (VANDERYST). — Proxima M. laxae et M. alienae, sed differt maculis magnis regularibus, setulis pellucidis.

212. Meliola Bomplandi Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4554
Buenos Aires XXIII p. 39 (1912). — Caespitulis saepius epiphyllis,
irregulariter orbicularibus, 1-5 mm. diam., laxissime fibrillosis et
siccando facillime deciduis, atris; hyphis laxe intertextis, repentibus, rectiusculis, 6-8 μ cr., subopace fuligineis, opposite ramosis,
dense hyphopodiatis; bicellularibus, e cylindraceo subconicis, obtusis, oppositis, leniter antrorsis, 10-14 \* 6-8, cellula supera conoi.
dea et saepe subuncinato-incurva, opace fuliginea; peritheciis paucis
e globoso sublenticularibus 150-180 μ diam., glabris, papillulosis,
astomis, non vel vix collabescentibus, coriacellis, atris, contextu
opaco indistincto; ascis non visis; sporidiis ellipsoideis, utrinque
leniter attenuatis rotundatisque, 28 \* 18, quadriseptatis, ad septa
modice constrictis, cellulis omnibus subaequalibus grosse 1-guttulatis, e latere leniter compressis, pallide fuligineis.

Hab. in foliis Sapindi saponariae (Sapindaceae), in nemoribus prope Bompland, Misiones: Argentina.

213. Melicia Serianiae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4555 II, 1916, p. 512, fig. 42. - Coloniis hypophyllis, irregularibus, atris. 1-6 min. diam., hyphis 6 µ cr., irregulariter ramosis, laxe reticulato-contextis; hyphopodiis capitatis minutis, alternis vel irregularibus, 40-70 µ inter se distantibus, cellula capitata ovoidea vel piriformi et valde lobata, 17 × 10, basilari 3-6 μ longa; hyphopodiis mucronatis plerumque copiosioribus, oppositis, e ampulliformibus conoideis, angustis, 24 × 6; setis perithecialibus nullis, mycelialibus copiosis, rectis vel leniter curvis, ubique atris, apice abrupte acutatis, 280-800 × 10; peritheciis 150-190 µ diam.; ascis mox evanidis; sporidiis 4-septatis, brunneis, constrictis, obtusis, 41 = 17.

Hab. in foliis Serjaniae polyphyllae (Sapindaceae), Porto Rico. - A caeteris speciebus in Sapindaceis plane recedens. 214. Meliola Dipholidis Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4556 II, 1916, p. 512. - Coloniis amphigenis, irregulariter circularibus, 2-5 mm. diam.; mycelio atro, ramis plerumque oppositis, laxe contexto, 7 µ crassis; hyphopodiis capitatis minutis, alternis vel irregulariter sparsis, non crebris, uno pro cellula, cellulis 27 µ circlongis, cellula capitata obovoidea, piriformi vel globulosa, saepe augulosa vel curvata, 17 × 10, basilari 5-7 μ longa; hyphopodiis mucronatis alternis vel oppositis e cuneatis ampulliformibus, 18 > 7; setis perithecialibus nullis, mycelialibus paucis, rectis vel leniter curvis, 400 × 7, ubique fuscis, apice acutis; peritheciis 110-150 μ diam., tenuiter scabris; ascis bisporis, mox evanescentibus; sporidiis 4-septatis, brunneis, cylindraceo ellipsoideis, medio incrassatis, ad septa valde constrictis, obtusis, 41-44 × 18.

Hab. in foliis Dipholidis salicifoliae (Sapotaceae), Guayanilla et Quebradillas, Porto Rico. - A M. amphitricha differt hyphopodiis capitatis sporidiisque alienis, a M. brasiliensi characteribus sporidiorum et setarum.

215. Meliola Lucumae Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4557 1916, p. 517, fig. 47. — Coloniis amphigenis, in hypophyllo latioribus, irregulariter circularibus, 2-10 mm. diam., diffusis; mycelio laxe reticulato contexto, hyphis 7 µ cr., plerumque opposite ramoso; hyphopodiis capitatis alternis, distantibus, uno in quaque cellula, cellulis 35 µ circ. longis, cellula capitata cylindrica vel utrinque leniter attenuata, 17 \* 7, basilari 3 µ longa; hyphopodiis mucro-

natis paucis, plerumque oppositis, subconicis, circ. 20 \* 4; setis perithecialibus nullis, mycelialibus paucis, leniter curvis, 200-800 ₹7, ubique fuscis, apice obtusis; peritheciis 100-150 μ diam., ob papillulas rotundatas scabris; ascis mox evanidis; sporidiis 4-septatis, pallide brunneis, leniter constrictis, obtusis, 44 × 18.

Hab. in foliis Lucumae multiflorae (Sapotaceae), Las Marias, Porto Rico. - Mycelio sparso, diffuso, hyphopodiis capit. cylindraceis, mucronatis parum distinctis consociatis distinguenda species.

216. Meliola Peglerae Doidge, Trans. R. Soc. Soyth. Afr. V. 1917, 4558 p. 730, t. 63 f. 24. - Epiphylla, subcrustacea, nigra, colonias orbiculares 1-3 mm. diam., interdum confluentes formans; hyphis septatis ex cellulis 8-14 × 7-9 umbrinis formatis, ramulis anastomoticis; hyphopodiis capitatis numerosis alternis v. unilateralibus, breviter stipitatis, cellulis basalibus 7 × 4-7, terminalibus obovoideis, saepe curvis, 14-18 \* 7-11; hyphopodiis mucronatis paucis oppositis, ampulliformibus 14-22 \* 7: setis mycelialibus nullis; peritheciis in centro coloniae confertis, nigris 126-233 µ diam, cellulis superficiei mamillatis; ascis 2-4-sporis, evanidis; sporidiis oblongis utrinque rotundatis. 4-septatis, ad septa leniter constrictis, 29-43 × 16-18.

Hab. in foliis Anastiabes integerrimae (Scrophulariaceae), et fruticis indeterminati, Kentani et pr. Durban, Africae austr. (A. PEGLER et WOOD).

217. Meliola capsicicola Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 4559 II, 1916, p. 509, fig. 39. — Coloniis amphigenis, circularibus, 1-3 mm. diam., atris; mycelio densissime reticulato contexto, hyphis 7 μ crassis, sinuosis, irregulariter ramosis; hyphopodiis capitatis alternis, non crebris, uno pro cellula, cellulis 20-30 µ longis, cellula capitata forma et magnitudine irregularissima, basilari saepe elongata; hyphopodiis mucronatis paucis, sparsis, phialiformibus, irregularibus, 20 × 7; setis perithecialibus nullis, mycelialibus copiosis, rectis vel leniter curvis, 265 > 10, apice acutis, ubique fuscis; peritheciis 170 µ diam., scabriusculis; ascis cito diffluentibus; sporidiis 4-septatis, brunneis, leniter constrictis, obtusis, 41 × 14.

Hab. in foliis caulibusque Capsici baccati (Solanaceae), Manati et Dos Bocas, Porto Rico. - Species praecipue ob irregularitatem hyphopodiorum eximie distincta.

218. Meliola Cestri L. R. Tehon, Bot. Gazette, 67., 1919, p. 505. - 4560 Coloniis epiphyllis irregulariter circularibus 1-3 mm. diam.; mycelio obscuro, dense reticulato, hyphis 9-10 μ cr. formato; hypho-

podiis capitatis oppositis, phyalaeformibus 24-28 • 9; setulis perithecialibus nullis, mycelialibus numerosis, rectis, nigris, 650-850 • 10-11, apice obtusis; peritheciis numerosis, centro aggregatis, juventute corona hypharum circumdatis, levibus, 225-275 μ diam.; ascis mox evanidis; sporidiis 4-septatis, obscure brunneis, cylindraceis 50-55 × 18-20, maturis ad septa constrictis.

Hab. in foliis Cestri sp. (Solanaceae), Mayaguez, Porto Rico.—A M. Gesnerii Stev. quaque in Cestro omnino diversa.

- 219. Meliola Henningsii Beeli, Bull. Jard. Bot. Etat Bruxelles, v. 7., 4561 1920, p. 100. Ita vocanda est Mel. solanicola Henn. 1900 non Gail 1892.
- 220. Meliola Solani Stevens, Mel. Porto Rico in Illin. Biol. Monogr. 4562 II, 1916, p. 15, fig. 7. Coloniis amphigenis, irregulariter circularibus, 2-4 mm. diam.; mycelio atro, dense reticulato, 7  $\mu$  diam., irregulariter ramoso; hyphopodiis capitatis minutis, plerumque oppositis, haud crebris, in quaque cellula binis, cellulis 17  $\mu$  circ. longis; cellula capitata pyriformi vel globulosa 10 × 8, basilari brevi; hyphopodiis mucronatis paucis, alternis vel oppositis, ampulliformibus, 14 × 7; setis mycelialibus nullis, perithecialibus paucis vel nullis, rectis vel leviter incurvis, 125 × 7, obtusis, atris; peritheciis, 150-180  $\mu$  diam.; ascis mox evanidis; sporidiis 4-septatis, brunneis, lenissime constrictis, obtusis, 37 × 14.

Hab. in foliis Solani jamaicensis (Solanaceae), Monte d'Oro, Porto Rico. — Hyphopodiis capitatis minutis, subglobosis, saepius oppositis praecipue distincta.

221 Meliola laeta Theiss., Broteria, Bot., v. XII, 1914, fasc. I, p. 24, 4563 fig. 3. — Plagulae dense sparsae, 2-3 mm. latae, opace nigrae. Hyphae mycelii alterne ramosae, graciles, 5,5-6,5 μ crassae, fuliginellae, glaberrimae, cellulis elongatis, 30-35 μ longis, setae nullae. Hyphopodia capitata concolora, pedicello cylindrico brevissimo (3-4 μ), capitulo ovato vel globoso integro recto 10-12 μ lato; hyphopodia mucronata alterna, saepe geminata, ampulliformia, curvata. Perithecia 220 μ diam., applanato-globosa, nigra, verrucosa, e cellulis magnis angulosis ca. 22 μ latis contexta (cellulae fuligineae, membrana exteriore nigra et crassiore, circa pseudo estiolum subconcentrice ordinatae). Asci bispori 55 × 25. Sporae brunneae, cylindraceae, rectae, rarius curvulae, 4-septatae, leniter ad septa constrictae, 48 × 17, cellulis aequalibus.

Hab. epiphylla in foliis Solani (†) sp. (Solanaceae), S. Leopoldo, Brasiliae meridionalis (J. RICK).

222. Meliola oligomera Syd., Ann. Mycol. 15.,1917, p. 190.—Amphigena, 4584 plerumque epiphylla, pelliculosa, leniter velutina, aterrima, plagulas irregulares tandem confluentes et plus minus effusas saepe totam folii superficiem occupantes formans; mycelium ex hyphis dense intertextis copiose ramosis anastomasantibusque castaneo-brunneis 6-8 μ crassis septatis formatum; hyphopodia capitata numerosissima, irregularia, alternantia, 20-25 μ longa, cellula superiore semper valde irregulariterque lobata et 10-18 μ lata, inferiore stipitiformi anguste cylindracea; hyphopodia mucronata rara, setae myceliales copiosae, rectae vel subrectae, tota superficie opacae, simplices, ad apicem acutatae 200-250 μ longae, ad basim 8-10 μ crassae; perithecia gregaria, globosa, in sicco collapsa 150 200 μ diam.; asci mox diffluentes; sporae cylindraceae 3-septatae, leniter constrictae, utrinque rotundatae, cellulis fere aequalibus, 40-44 τ 12-14, castaneo-brunneae, in maturitate subopacae.

Hab. in foliis Turpiniae sp. (? Staphyleaceae), Rizal, Luzon Ins. Philipp. (M. RAMOS).

223. Meliola styracicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4565 Buenos Aires XXIII p. 44 (1912). — Caespitulis orbicularibus, evanescentibus, 3.10 mm. diam., amphigenis, arcte adnatis, non deciduis, parcissime setulosis; hyphis repentibus circa perithecia alterne geniculato-denticulatis ut in *M. zig-zag*, ceteris irregulariter ramosis, 6-8 μ cr.; hyphopodiis paucis, alternis, lageniformibus vel conoideis; setulis erectis, 100 200 × 5 8, opace fuligineis, fragilibus, subdeciduis, apice integris et conidium fusoideum 3-septatum vel 4-5-blastum 30-40 × 8-9, olivaceum gerentibus; peritheciis globosis, glabris, subcarbonaceis, astomis, non collabentibus, 150-250 μ diam., grosse verrucosis; ascis ovatis, 2-3-sporis, mox diffluentibus; sporidiis subfusoideis vel cylindraceo-ellipsoideis, e latere compressis, 58-60 × 20-24 × 16-18, 4-septatis, vix constrictis, opace fuligineis, loculo centrali conspicue majore.

Hab. in foliis vivis Styracis leprosae (Styracaceae), in silvis prope Puerto Leon, Misiones: Argentina.

224. Meliola Celtidiae H. S. Yates, The Philipp. Journ. of Sc., Bot., 4566 13., 1918, p. 367. — Hypophylla, atra, velutina, maculas orbiculares, 1-2 cm. diam. efformans; mycelio ex hyphis brunneis septatis tortuosis anastomosantibus radiantibus 10-12 μ crassis composito; hyphopodiis capitatis numerosis, alternantibus, cellula superiore globosa, 15-18 μ diam. vel lobata et 12-20 μ longa, 10-25 μ lata; hyphopodiis mucronatis numerosis, irregularibus, ampullifor-

mibus, usque ad 20-30  $\mu$  longis; setis rectis, erectis, ad basim geniculatis, 809.1200  $\mu$  longis, 20-25  $\mu$  crassis, atris, opacis, obtusis; peritheciis numerosis, atris, opacis, tuberculatis, globosis vel applanatis, 175-225  $\mu$  diam.; ascis evanescentibus; sporidiis obscure fuscis, oblongis, utrinque rotundatis, 4-septatis, ad septa constrictis. 50-55  $\approx$  15-20.

Hab. ad folia Celtidis luzonensis (Ulmaceae), Catubig River Samar, Ins. Philipp. (RAMOS).

225. Meliola celticola H. S. Yates, The Philipp. Journ. of Sc., Bot., 4567 13., 1918, p. 366. — Amphigena, maculas atras, pelliculosas, orbiculares, 2-4 mm. diam., vel confluentes efformans; mycelio ex hyphis dense intertextis brunneis 7-8 μ cr. ramosis et anastomosantibus composito; hyphopodiis capitatis numerosis, alternantibus, cellula superiore angulata vel irregulari, 20-25 μ diam., cellula inferiore 10 μ longa, 4-5 μ lata; hyphopodiis mucronatis numerosis, plerumque alternantibus, ampulliformibus, 20-30 μ longis; setis mycelicis paucis, atris, opacis, ad apicem uncinatis, acutis, rarius obtusis 250-350 μ longis, 6 μ crassis, peritheciis numerosis, globulosis, atris, verrucosis, 159-225 μ diam.; ascis bisporis, evanescentibus; sporidiis cylindraceis, castaneo-brunneis, 4-septatis, ad septa constrictis, utrinque late rotundatis, 45-50 × 17-19.

Hab. ad folia Celtidis philippinensis (Ulmaceae), Bangui, Prov. Llocos Norte, Luzon, Ins. Philipp. (RAMOS).

226. Meliola Tremae Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue-4568 nos Aires, XXIII p. 45 (1912). — Caespitulis amphigenis, saepius epiphyllis, orbicularibus vel confluenti-difformibus, 1-5 mm. diam., arcte adnatis, non deciduis, atris, tenuiter membranaceo-araneosis; hyphis repentibus irregulariter intertextis, rectiusculis, 8-10 μ cr., fuligineis, opposite ramosis; hyphopodiis laxis, saepius alternis, clavulatis vel sublageniformibus, 20-25 × 12-14, subopacis; setis nullis; peritheciis gregariis, subhemisphaericis, astomis, basi subapplanatis, grosse verrucosis, 150-200 μ diam.; ascis ellipsoideis, 60-65 × 20-25, bisporis, mox diffluentibus; sporidiis e latere subellipticis, e fronte cylindraceis, 4-septatis, vix constrictis; 40-44 × 16-18, primo tunica mucosa tenui obvolutis, fuligineis, serius nudis, atro-opacis, loculo centrali nonnihil majore.

Hab. in foliis vivis Tremae micranthae (Ulmaceae), in silvis prope Puerto Leon, Mision 3: Argentina.

227 Meliola Leucosykes A. S. Yates, Philipp. Journ. Sc. Manila, XII 4569 (1917) p. 366 (M. Leucosykeae). — Epiphylla, plagulas atras, orbi-

culares, 4-8 mm. diam. formans; mycelio sparso, ramis oppositis vel irregularibus, ex hyphis brunneis, septatis 7-8  $\mu$  latis composito; hyphopodiis capitatis numerosis, alternantibus, cellula superiore subglobosa, 10  $\mu$  longa, 12-14  $\mu$  lata; cellula inferiore 5  $\mu$  longa; hyphopodiis mucronatis paucis, ampulliformibus, 10-15  $\approx$  4-7; setis mycelicis numerosis 300  $\mu$  longis, ad basim ad 8  $\mu$  latis, erectis, rectis vel leviter curvatis, inferne atris, opacis, apicem versus dilutiorem brunneis, obtusis; peritheciis globosis, 230-260  $\mu$  diam., tuberculatis, ascis oblongis, 60-70  $\approx$  25-30, 6-8 sporis; sporidiis 3-septatis ad septa non constrictis, utrinque late rotundatis, fuscis, 35-40  $\mu$  longis, 14-16  $\mu$  latis.

Hab. in foliis Leucosykes capitellatae (Urticaceae), Catubing River, Samer Ins. Philipp.

228. **Meliola Earlii** Stev., Mel. Porto Rico, in Ill. Biol. Monogr. II, 4570 1916, p. 515, fig. 45. — Coloniis amphigenis, irregularibus, 1-4 mm. diam., hyphis undulatis, irregulariter ramosis, saepe ad hyphopodia angulatis, 6  $\mu$  diam., laxe reticulato-contextis; hyphopodiis capitatis minutis, alternis, non confertis, 25  $\mu$  circ. inter se distantibus, ovatis vel piriformibus, interdum angularibus vel curvis,  $10 \times 8$ , cellula basilari brevi; hyphopodiis mucronatis paucis, ampulliformibus; setis perithecialibus nullis, mycelialibus paucis vel copiosis, 160  $\mu$  circ. longis, rectis vel leniter curvis, opacis, apice acutis; peritheciis 160  $\mu$  diam., scabris ob papillulas rotundatas, non ostiolatis; ascis mox evanidis; sporidiis 4-septatis, brunneis, subcon strictis, obtusis, 35-40  $\times$  10.

Hab. in foliis Pileae sp. (Urticaceae), Porto Rico - Socia adest M. triloba, a qua tamen species haec facile dignoscitur.

229. Meliola sepulta Pat. ap. Stevens, Mel. Porto Rico in Illin. biol. 4571 Monogr. II, 1916 p. 482, fig. 5. — Coloniis circularibus, 1-7 mm. diam., atris, densis, plerumque hypophyllis, mycelio crebre ramosoreticulato; hyphopodiis capitatis, 24 × 14, oppositis vel alternis, cellula capitata augulari vel saepe distincte lobata, basilari 10 μ longa; setis mycelialibus et perithecialibus nullis; peritheciis in partibus coloniae vetustioribus copiosis, 170 μ diam., tenuiter scabris; ascis evanidis, brevibus, crassis, 2-4-sporis; sporidiis 52 × 20, 4-septatis, valde constrictis, utrinque obtusis.

Hab. in foliis Avicenniae nitidae (Verbenaceae), Porto Rico.

230. Meliola vilis Syd. in Leaflets of Philipp. Bot. VI (1913) p. 1926.— 4572 Mycelio epiphyllo, effuso, tenuissimo, parce conspicuo, ex hyphis

longiusculis, ramosis, fuscis, 6-8  $\mu$  crassis composito; hyphopodiis capitatis alternantibus, bicellularibus, apice obtusis, 18-24 \* 10-12; hyphopodiis mucronatis oppositis  $18\text{-}25~\mu$  longis; setis nullis; peritheciis sparsis, globosis,  $80\text{-}130~\mu$  diam., rugulosis, atris; ascis ovatis, 2-3-sporis; sporidiis oblongis, utrinque obtusis, 4-septatis, ad septa constrictis, fuscis, 34-40 \* 13-16.

Hab. in foliis vetustis Callicarpae Blancoi (Verbenaceae), Cabadbaran, Mindanao, ins. Philipp. — A M. Callicarpae Syd. recedit setarum defectu, hyphopodiis non oppositis et sporidiis latioribus.

231. Meliola Callicarpae P. et H. Syd., Ann. Mycol. X, 1912, p. 80.— 4573 Mycelio epiphyllo, laxo, ex hyphis repentibus fuscis 5-6 μ cr. composito; hyphopodiis oppositis v. alternantibus, sessilibus, oblongis 9-13 μ long.; setulis mycelii erectis, rectis, septatis, simplicibus, usque 400 μ long. 9-10 μ cr.; peritheciis globosis, tuberculatis, atris, 90-120 μ diam.; ascis 30-45 × 20-30, 2-4-sporis; sporidiis oblongis, utrinque rotundatis, 4-septatis, constrictis, fuscis, 28-32 × 9-11.

Hab. in foliis Callicarpae canae (Verbenaceae), prope Manila, Ins. Philippin. (E. D. MERRILL).

232. Meliola sakawensis Henn.—Syll. XVII, p. 548 — var. longispora 4574
Beeli, Bull. Jard. Bot. État Bruxelles, v. 7., 1920, p. 98. — A typo
differt setis mycelicis 250-300 \* 8, sporidiis majoribus 36-38 \* 14.

Hab. epiphylla in foliis Clerodendri sp. (Verbenaceae), Wombali, Congo, Africae trop. (VANDERYST).

233. Meliola micromera H. et P. Sydow, Ann. Mycol. XII, 1914, p. 552.— 4575
Amphigena, plagulas tenuissimas effusas parum perspicuas formans;
mycelio ex hyphis subrectis v. flexuosis subinde subtorulosis 6-8 μ
cr. composito; hyphopodiis capitatis numerosis, alternantibus, 1216 μ long. 9-10 μ latis, cellula superiore rotundata ovata v. ovatoglobosa; hyphopodiis mucronatis raris; setis mycelicis sparsis haud
numerosis, brevibus, 150-200 × 6-7, apice semper obtusis, subrectis,
flexuosis v. varie curvatis, saepe subfalcatis, obscure brunneis, subpellucidis usque opacis, crasse tunicatis; peritheciis sparsis, globosis, astomis, 100-150 μ diam.; ascis ovatis, 2-4-sporis; sporidiis
breviter cylindraceis, utrinque obtusis, 4-septatis, non v. parum
constrictis, sordide fuscis, 25-28 × 10-13.

Hab. in foliis G melinae philippinensis (Verbenaceae), Angat prov. Bulcan, Ins. Philippin. (M. RAMOS).

234 Meliola Lantanae Syd. ap. Fuhrmann et Mayor, Voy. Expl. scient. 4576
Colombie, in Mém. Soc. neuchât. Sc. Nat. V p. 434 (1913). — My-

celio amphigeno, maculas orbiculares vel irregulares, 1.3 mm. latas, tenues, saepe confluentes, modice manifestas efficiente, ex hyphis dense intertextis anastomosantibusque, subtorulosis, obscure fuscis. 7-10 µ cr. composito; hyphopodiis capitatis modice copiosis, plus minus longe stipitatis, totis 20-28 µ longis, 9-12 µ latis, cellula superiore ovata vel ovato-globosa; hyphopodiis mucronatis raris, 20 µ usque longis; setis mycelicis sparsis, rectis, erectis, rigidis, apice obtusis, septatis, usque ad 450 µ longis, 6.8 µ cr., inferne saepe opacis, superne translucidis; peritheciis globosis, astomis, tuberculatis, atris, minutis, 80-200 µ diam., in sicco collapsis; ascis ovatis, 40-45 > 10-25, bisporis; sporidiis oblongis, 4-septatis, ad septa constrictis, utrinque rotundatis, fuscis, 34-40 > 10-14.

Hab. in foliis Lantanae hispidae (Verbenaceae), in regione andina prope Angelopolis, Columbia, alt. 1600-2000 m. - Affinis M. ambiguae a qua differt praecipue peritheciis minoribus, et M. microsporae a qua sporidiis et hyphopodiis capitatis majoribus recedit.

235. Meliola callista Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 4577 Botany VI (1914) p. 2191. — Mycelio epiphyllo plagas circulares arachnoideas, 8-10 mm. latas, demum confluentes, nigridulas efformante, ex hyphis parce ramosis, septatis, 5-6 µ cr. efformato; hyphopodiis capitatis sparsis, alternis, 2-cellularibus, cellula inferiore cylindracea, superiore globulosa, interdum recurvata, 20-25 \* 12, hyphopodiis mucronatis nonnullis 12 \* 7; setis mycelialibus paucis, erectis, obtusis, 200 \* 5-6; peritheciis in centro mycelii sparsis, globosis, astomis, nigris, glabris, 200 µ diam, levibus, exappendiculatis; ascis primo cylindraceis 80-100 × 18, dein ovatis 80 × 35, octosporis; paraphysibus ramosulis, septatis, 4 p cr.; sporidiis distichis, subclavatis, utrinque obtusis, 3-septatis, non constrictis, fuscis, 30-35 \* 12-14. — Mycelium obsessum filamentis erectis, crassis, nigris, 2 mm. usque altis, ad basim circ. 50 µ latis, ex hyphis parallelis, fuscis, septatis, 0,4 µ circ., arcte conglutinatis contextis, supra medium filamenti sensim ramose secedentibus, ad apicem plane dissolutis, obtusis, plerumque recurvatis, dilutioribus, conidium gerentibus. Conidia fusiformia, obtusa, flavo-fusca, 4-6-septata, non constricta, in pedicellum elongata, 45-50 × 8.9.

Hab. ad folia Premnae odoratae (Verbenaceae), Luzon, Prov. Laguna, Los Baños (S. A. REYES).

236. Meliola aciculosa Wint. - Syll. IX p. 421. - var. Viticis Rehm, 4578 Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2257.

A typo recedit tantum mycelio obscure fusco arcte compresso.

Hab. ad folia Viticis Negundinis (Verbenaceae), Los
Baños, ins. Philipp. (S. A. REYES).

237. Melicia rizaiensis H. et P. Sydow, Ann. Mycol. XII, 1914, p. 551.— 4579 Plerumque epiphylla, indeterminata, confluens, saepe totam folii superficiem irregulariter occupans, subpelliculosa; mycelio ex hyphis castaneo-brunneis fere rectangulariter ramosis 7-9 μ cr. composito; hyphopodiis capitatis numerosis, alternantibus integris, 12-18 × 10-12, cellula superiore globulosa v. late ovata, inferiore brevi v. brevissima; hyphopodiis mucronatis non visis; setis mycelicis perraris, castaneo-brunneis, subopacis, ad apicem obtusis, simplicibus, rectis, 100-175 × 6-9; peritheciis dense sparsis, globosis, minute ostiolatis, haud tuberculatis, 130-160 μ diam.; ascis ovatis, 2-3 sporis; sporidiis ellipsoideo-oblongis v. oblongis, 4-septatis, parum constrictis, castaneo-brunneis, 26-36 × 10-15.

Hab. in foliis Viticis parviflorae (Verbenaceae), Antipolo prov. Rizal, Ins. Philippin. (M. RAMOS).

238. Meliola macrochaeta Syd. in Leaslets of Philipp. Bot. V (1912) 4580 p. 1538. — Mycelio hypophyllo, tenuissimo, effuso, plagulas tenues, discoideas vel subdiscoideas, 0,5-1,5 cm. latas, subinde confluentes efformante; hyphis longissimis, 8-10 μ crassis, remote septatis, laxe ramosis (ramis plerumque longiusculis) obscure brunneis composito; hyphopodiis mucronatis alternis vel oppositis, e basi lata apicem versus acute tenuatis, 22-38 μ longis, basi 8-10 μ cr., fuscis; hyphopodiis capitatis alternis, clavatis, rectis vel curvulis, distincte 3-5 cellularibus, 30-40 × 14-18; setis mycelicis nullis; setis perithecialibus longissimis, usque ad 900 μ, 11-16 μ crassis, atris, opacis, rigidis, apice bidentatis, dentibus usque ad 15 μ longis; peritheciis in mycelio sparsis, depresso globosis, valde rugosis, atris, 175-225 μ diam.; ascis late ovatis, bisporis, mox diffluentibus; sporidiis oblongis, utrinque late rotundatis, 4-septatis, ad septa constrictis, 45-52 × 16-18, obscure brunneis.

Hab. in foliis vetustis Alsodeiae formicariae (Violaceae), Puerto Princesa, Palawan, ins. Philipp. — Setis perithecialibus perlongis et hyphopodiis majusculis pluricellularibus eximie distincta.

239. Melicia Merrillii Syd., Enum. Philipp. Fungi II, in Philipp. Journ. 4581 of Sci. VIII (1913) p. 479. — Epiphylla, subpelliculosa, atra, velutina, primitus maculas 2-8 mm. diam. formans, dein confluens et plus minusve effusa; mycelio ramoso, anastomosante, fusco brun-

neo, ex hyphis septatis 8-10  $\mu$  crassis composito; hyphopodiis capitatis numerosis, alternis, 20-26  $\mu$  longis, cellula basali brevi, superiore globulosa vel lenissime lobata, crassa, 11-14  $\mu$  lata; hyphopodiis mucronatis rarioribus, oppositis, ampulliformibus, usque ad 24  $\mu$  longis; setis mycelicis numerosissimis, erectis, basi geniculatis, 160-220  $\times$  9-11, septatis, opacis vel subopacis, superne in ramos duos patentes, 35-70  $\mu$  longos divisis, ramis ad apicem sive tantum bi-tridentatis, dentibus 3-10  $\mu$  longis, sive rarius iterum in ramulos duos divisis et ramulis his ad apicem breviter 2-3-dentatis; peritheciis sparsis, globosis, levibus, 140 175  $\mu$  diam.; ascis ovatis 2-3-sporis, fugacibus; sporidiis oblongis, 4-septatis, ad septa constrictis, fuseis, utrinque late rotundatis, 34-38  $\times$  12-14.

Hab. in foliis vivis C is si? ad natae (Vitaceae), Luzon, Prov-Laguna, Mt. Maquiling, ins. Philipp. (MERRILL). — Affinis M. patenti Syd. a qua differt habitu alieno, peritheciis minoribus non rugosis sporidiisque angustioribus.

240. Meliola varia Doidge, Trans. R. Soc. South. Afr. V, p. 738 et 458 747, t. 65 fig. 40. — Amphigena, plagulas minutas, atras, 1-2 mm. diam., efficiens; hyphis sinuatis, irregulariter 7-9 μ crassis, brunneis, cellulis 18-25 μ long., compositis; ramis plerumque alternis v. unilateralibus; hyphopodiis capitatis remotis, non numerosis, alternis v. unilateralibus, 21-35 μ long., cellula superiore ovato. globosa 14-15 × 10,5-12; hyphopodiis mucronatis rarissimis, pallidioribus ca. 11 × 5-6; setis mycelicis numerosis, 180-226 μ longis erectis, rigidis, stipite opaco, simplice, 160-190 × 10; superne ramosis, pellucidis, aliis in ramos ternos breves (ca. 18 μ) apice bifurcatos divisis, aliis in ramos duos (18-30 × 8) patentes divisis, ramis iterum in ramulos duos v. ternos, globosis, in sicco leniter collapsis, verrucosis, 160-180 μ diam., ascis non vivis; sporidiis 4-septatis, ad septa vix constrictis, cylindricis utrinque rotundatis, 45-50 × 15-18.

Hab. in foliis Cissi rhomboideae (Vitaceae), Winter's Kloof, Natal, Africa austr. (E. M. DOIDGE).

241. Meliola amomicola Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 458: II, 1916, p. 508, fig. 37. — Coloniis plerumque hypophyllis, atris, circularibus vel irregularibus, diffusis, 5-15 mm. diam.; mycelio sat dense contexto, subcompacto, ex atro pallide stramineo, ramis utplurimum oppositis, 6 μ crassis; hyphopodiis capitatis plerumque oppositis, binis in quaque cellula, cellulis 24 μ circ. longis; cellula capitata cylindrica, recta vel curva, basilaris vix crassiore,

cellula basilari 2-4 µ longa; hyphopodiis mucronatis sparsis, ampulliformibus, 24 × 6; setis perithecialibus nullis, mycelialibus sparsis longis. 900-1000 \* 10, basi incrassatis, ubique atris, acutis: peritheciis sparsis, 186 µ diam.; sporidiis 15 × 17, valde constrictis. obtusis.

Hab. in foliis Amomi caryophyllatae (Zingiberaceae). Mayaguez, Porto Rico.

242. Meliola aibonitensis Stev., Mel. Porto Rico in Ill. Biol. Monogr. 4584 II, 1916, p. 484. - Coloniis amphigenis, atris, circularibus dein irregularibus, 1-3 mm. diam.; mycelio densiuscule contexto, contorto, undulato, irregulariter ramoso; hyphopodiis capitatis alternis vel unilateralibus, inter se sat proximis, saepe 17 μ, cellula capitata subglobulosa, 10-15 p diam., basilari brevi; hyphopodiis mucronatis sparsis, e ampulliformibus conicis; setis mycelialibus et perithecialibus nullis; peritheciis in juventute saepeque etiam in maturitate applanatis, areola myceliali radiatim cinctis, scabriusculis, 140 µ diam.; sporidiis 4-septatis, 14 × 17, obtusis, leniter constrictis.

Hab. in foliis Dicotyledoneae quaedam haud determinatae, Aibonito, Porto Rico.

243. Meliola leopoldina Theiss., Broteria, Bot., v. XII, 1914, fasc. I, 4585 p. 25. - Plagulae myceliales epiphyllae, minutae, 2 mm. diam., opacae; peritheciis paucis. Hyphae mycelii opposite vel alterne ramosae, cellulis elongatis 40 µ. Hyphopodia capitata opposita, 16-20 × 10, cylindraceo-clavata pedicello brevissimo, capitulo subclavato, integro, saepe fere cylindraceo. Setae myceliales basi geniculatae, 10 μ crassae 350 μ longae, septatae (cellulis 40-46 μ longis), rectae, nigrae, apice subacutatae integrae. Perithecia globosa, astoma 270-320 µ diam., parenchymatice contexta e cellulis polygoniis rubro-brunneis (membrana obscuriore) extus leniter prominulis (perithecium verrucosum reddentibus) 10-14 µ cr. Asci 2-3spori elongato-clavati vel elliptici. Sporae rectae, late cylindricae 4-septatae, cellulis aequalibus guttulatis, 55-68 \* 24-30, olivaceobrunneae.

Hab. in foliis coriaceis plantae Dicotyledoneae, S. Leopoldo, Brasiliae (J. RICK).

244. Meliola leptopus Theiss., Broteria, Bot., v. XII, 1914, fasc. I, p. 23.— 4586 Irregulariter plus minus totam folii laminam inquinans; opace nigra. Hyphae mycelii 8-9 µ crassae, rectae, brunneae, opposite vel alterne ramosae. Hyphopodia capitata opposita pedicellata, recta

cylindraceo-clavata, saepe fere cylindracea, integra, 18-20 × 10; hyphopodia mucronata ampulliformia, continua, opposita, approximata, recta vel incurva. Setae myceliales ca. 350 × 8, fuligineobrunneae, reotae, basi late arcuatae, apice lactiores sensim acutatae. Perithecia ca. 280 µ diam., globulosa, verrucosa (cellulis extus acute prominulis polygoniis), cellulis rubro-brunneis irregulariter polygoniis, 25-48 µ magnis ostiolo demum irregulariter stellato aperta. Asci bispori, ca. 56 × 34, elliptici. Sporae brunneae, 4-septatae, cylindraceae, guttulatae, constrictae, cellulis aequalibus (vix extimis majoribus), 48-54 × 16-20.

Hab. amphigena in foliis plantae Dicotyledoneae indeterminatae, S. Leopoldo, Brasiliae merid.

245. Meliola tuberculata Stev., Mel. Porto Rico, in Ill. Biol. Monogr. 458 II, 1916, p. 490. - Coloniis amphigenis, saepius epiphyllis, saturate atris, 1-3 mm. diam., circularibus; mycelio sat denso, valde sinuoso; hyphopodiis capitatis alternis, ovatis vel irregulariter lobatis, typice 30 µ circ. distantibus; hyphopodiis mucronatis paucis, anguste conoideis; setis mycelialibus et perithecialibus nullis; peritheciorum appendicibus conoideis, 51 × 27, copiosissimis, quaque fere cellula superficiali in appendicem producta; peritheciis 160 µ diam.; ascis evanidis; sporidiis 4-septatis, 38 × 14, obtusis, leniter constrictis.

Hab. in foliis Dicotyledoneae cujusdam haud determinatae, Vega Baja, Porto Rico. - Species appendicibus perithecialibus, mycelio sinuoso-contorto hyphopodiisque variabilibus eximie distincta.

246. Meliola aliena Syd. in Leaflets of Philipp. Bot. V (1912) p. 1535. - 4588 Plagulas atras velutinas effusas ca. 0,5-1 cm. longas vel confluendo majores efformans; mycelio proprio repente parcissime evoluto, ex hyphis fuscis septatis 6-8 µ cr. composito; hyphopodiis alternantibus, irregularibus, rectis vel curvulis; setis mycelicis e contra numerosissimis, validis, rectis vel subrectis, vel etiam irregulariter curvatis, atris, opacis, 200-275 µ longis, 8-14 µ cr., apicem versus tenuatis sed obtusis; peritheciis gregariis, globosis, 130-170 µ diam., atris, globosis, tuberculatis; aseis bisporis, ovatis, fugacibus; sporidiis oblongis, utrinque rotundatis, 4 septatis, non vel vix constrictis, fuscis, 38-45 \* 9 13.

Hab, in ramulis dejectis, Puerto Princesa, Palawan, ins. Philipp.— Setis copiosissimis crassis praecipue distincta.

247. Meliola conferta Doidge, Trans. R. Soc. South Afr. V, 1917, p. 724 458 et 743, t. 59, fig. 13. - Amphigena, maculas atras, subcrustaceas

1-3 mm. diam. efficiens; hyphis fuscis rectis, ramosis, 6-8  $\mu$  crassis, ex cellulis 11-18  $\mu$  longis compositis; ramis numerosis, oppositis; hyphopodiis capitatis numerosissimis, confertis oppositis, interdum unilateralibus vel alternis, 14-18  $\mu$  long.; cellula superiore diverse lobata, plerumque bi-triloba, quoque lobo bi-lobulato, 9-14  $\times$  11-14; hyphopodiis mucronatis pallidis, 18  $\mu$  long.; setis mycelicis nullis; peritheciis (vix maturis) paucis, sparsis, 100-130  $\mu$  diam., atris, verrucosis, quibusdam cellulis externis usque 18  $\mu$  productis; ascis non visis; sporidiis atro-brunneis, 3-septatis, ad septa vix constrictis, utrinque attenuatis et rotundatis, rectis vel leniter curvatis, 43-50  $\times$  18-25.

Hab. in foliis arboris ignotae, prope Durban, Africa austr. (J. MEDLEY).

248. Meliola curvata H. S. Yates, The Philipp. Journ. of Sc. Bot. 13., 4590 1918, p. 367. — Epiphylla, maculas atras, minutissimas, 0,5-2 mm. diam., orbiculares efformans vel confluentes; mycelio ex hyphis ramosis brunneis anastomosantibus septatis 7-8 μ crassis composito; hyphopodiis capitatis numerosis, plerumque alternantibus, cellula superiore globulosa, 10-12 μ diam., inferiore 3-5 μ longa; hyphopodiis mucronatis paucis, ampulliformibus, usque ad 20 μ longis; setis ca. 4-5 ad basim perithecii positis, primitus subhyalinis apice spiraliter curvatis dein erectis vel leviter curvatis, ad basim geniculatis, atris, 100-130 μ longis, 10 μ latis, apice acutis, simplicibus; peritheciis globulosis, atris, opacis, tuberculatis, 120-180 μ diam.; ascis ovatis, 4-sporis, 50-60 ≈ 30; sporidiis cylindraceis, utrinque late rotundatis, ad septa vix constrictis, brunneis, 40-45 × 15-20.

Hab. ad folia matricis ignotae, Catubig River, Samar, Ins. Philipp. (RAMOS).

249. Meliola heterodonta Syd., Ann. Mycol. 14., 1916, p. 357. — Effusa 4591 irregularis, confluens; mycelio ex hyphis longis fuscis 5.7 μ crassis vix septatis (articulis praelongis) undulato-flexuosis hinc inde torulosis composito; hyphopodiis capitatis sat numerosis, alternantibus, semper integris, subcylindraceis, totis 12-18 μ longis, cellula apicali 7.9 μ lata, inferiore brevi; hyphopodiis mucronatis etiam numerosis, oppositis, 22 26 μ longis, ad basim 5.6 μ latis. apicem versus tenuioribus; setis tantum circa basim peritheciorum evolutis ibique sat numerosis rectiusculis tota longitudine opacis, 350-700 μ longis, ad basim 10-12 μ latis ad apicem mox dentibus 2-6, erectis plus minus longioribus (3-20 μ longis) acutis praeditis, mox in ra-

mos duos fere erectos usque 30 μ longos divisis et ramis his apicem dentis 2 4 breves gerentibus; peritheciis sparsis tuberculatis, 130-160 µ diam., in sieco collapsis; ascis plerumque 2-sporis fugacibus; sporidiis oblongis, utrinque rotundatis, 4 septatis, (cellulis aequalibus), saturate castaneo-brunneis, ad septa constrictis, 30-35 ⇒ 9.12.

Hab. in foliis arboris ignotae, M. Maquiling, Ins. Philipp. (C. F. BAKER).

250. Meliola horrida Rehm, Ascomyc. Philipp. III, in Philipp. Journ. 4592 of Sci. VIII (1913) p. 393. - Mycelio amphigeno, plagulas orbiculares, arcte marginatas, subcrustaceas, nigras, hirsutas, 4-5 mm. latas, dispersas formante; hyphis acutangulariter ramosis, rectis, arcte congregatis, ad 8 µ cr., hyphopodiis capitatis plurimis, oppositis, fere adjacentibus, 2 cellularibus, brevissime stipitatis, cellula superiore globoso-ovoidea ad 14 × 8, hyphopodiis mucronatis rarissimis, alternantibus, ad 18 µ long. obsessis; setis mycelialibus olurimis, erectis, subacutatis, nigro-fuscis, usque ad 400 µ longis, basi 12 µ cr.; peritheciis sparsis, globosis, non verruculosis, astomis, atris, 200 μ diam.; ascis ellipsoideis, bisporis, 50 × 30; sporidiis oblongis, utrinque rotundatis, subconstrictis, 28 \* 18, flavofuscis.

Hab. ad folia coriacea, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER). - Setis densis, fuscis, longis et forma dispositioneque hyphopodiorum distincta.

251. Meliola megalopoda Syd., Ann. Mycol. 15., 1917, p. 189. — Amphi- 4593 gena, plagulas orbiculares aterrimas 3-6 mm. latas velutinas facile secedentes formans; mycelium matrici dense adpressum, copiose digitato-ramosum, ex hyphis dilute brunneis 10-12 µ latis copiose septatis formatum; hyphopodia capitata copiosa, alternantia, 30 38 µ longa, cellula superiore 18-24 µ lata semper et saepe profunde lobata, cellula inferiore angusto-cylindracea vel cuneata; hyphopodia mucronata rara, subito in collum angustum longum producta, usque 28 μ longa, setae myceliales copiosissimae, semper plus minus falcato-curvatae, 600-900 μ longae, basi 10-12 μ latae, apicem versus mox non vel vix attenuatae, mox magis attenuatae, sive tota longitudine opacae, atrae, sive ad apicem pellucide brunneae, simplices; perithecia globosa, inter setas abscondita, 280-350 µ diam., glabra, levia, in sicco cupuliformiter collapsa; asci facile diffluentes; sporae maximae oblongae, 4-septatae, valde constrictae, obscure castaneo-brunneae, utrinque late rotundatae 62-70 \* 22-30.

Hab. in foliis coriaceis arboris ignotae humi jacentibus in silva, Mt. Maquiling, Ins. Philipp. (C. P. BAKER).

252. Meliola natalensis Doidge, Trans. R. Soc. South Afr. V, 1917, 4594 p. 724 et 743, t. 59, fig. 12. — Amphigena, plerumque epiphylla, maculas atras carbonaceas, rotundatas, 2-3 mm. diam. efficiens; mycelio radiante ramoso; hyphis fuscis, subsinuosis et saepe ad septa constrictis, 6-8 μ crassis, e cellulis 14-18 μ long. compositis; ramis oppositis; hyphopodiis capitatis alternis v. unilateralibus, stipitatis, 18-21 μ long., cellula basali brevi, prope hyphas angustiore; capitulo latiore quam longo 2-3 lobato, quoque lobo-bi. lobulato, 12 14 × 16-20; hyphopodiis mucronatis raris, sparsis; tenuibus, rectis v. recurvatis, ca. 16-18 × 4-5, setis mycelicis nullis; peritheciis aggregatis, atris globosis, carbonaceis 130 150 μ diam., rugulosis, appendiculis numerosis, subcylindraceis, larviformibus, 40-45 × 18, apice interdum recurvatis; ascis bisporis; sporidiis 3-septatis, rectis v. leniter curvatis, ad septa valde constrictis 40 44 × 14-16.

Hab. in foliis arboris ignotae, Ungeni prope Durban, Natal, Africa austr. (E. M. DOIDGE).

253. Meliola samarensis H. S. Yates, Philipp. Journ. Sc. Manila, XII 4595 (1917) p. 368.— Plagulas atras, velutinas, confluentes et superficiem petioliorum obtengentia efformans; mycelio denso, ex hyphis obscure brunneis septatis, 7 8 μ latis composito, ramis irregularibus; hyphopodiis capitatis paucis, alternantibus vel irregularibus, cellula superiore globosa, 15 μ diam., vel elongata et 10-15 × 15-20; cellula inferiore 4-5 μ longa; hyphopodiis mucronatis paucis; setis mycelicis numerosissimis, validis, 300 μ longis, 16 μ latis, erectis, leviter curvatis, opacis, atris, apice simplicibus, acutis; peritheciis numerosis, 150-250 μ diam., atris, opacis, tuberculatis, costulatis; ascis evanescentibus, 60-70 × 35-40, 2-4-sporis; sporidiis 4-septatis, brunneis, oblongis, ad septa leviter constrictis, utrinque late rotundatis, 45-48 × 18-20.

Hab. in foliis petiolis plantae indet., Catubing River, Samar Ins. Philipp. (RAMOS). — Videtur affinis M. alienae.

IRENE Syd. et Theiss., Ann. Mycol. 15., 1917, p. 194.— Characteres . Meliolae sed setae nullae. — Typ. gen. Meliola inermis Kalch. et Cke.

1. Irene papillifera Syd., l. c. p. 194. — Epiphylla, plagulas minutas 4596 orbiculares 1-2 mm. diam. discretas formans; mycelium ex hyphis irregularibus saepe torulosis vel flexuosis septatis, obscure castaneo-

brunneis 9-11  $\mu$  latis parum ramosis compositum; hyphopodia capitata modice numerosa, valde irregularia, plerumque piriformia, sed saepe lobata aut angulata, cellula superiore maxima inferiore brevi stipitiformi, obscure brunnea, tota 25-32  $\mu$  longa, superne usque 20  $\mu$  lata, basi 7-9  $\mu$  lata, alternantia; hyphopodia mucronata haud numerosa alternantia vel opposita 22-26  $\mu$  longa; setae nullae; perithecia in centro plagularum panca conferta, aterrima, 150-200  $\mu$  diam., spurie ostiolata, contextu ex cellulis magnis sed variae dimensionis 14-22  $\mu$  diam. composito, ubique papillis conicis usque 35  $\mu$  longis ad basim 24-28  $\mu$  latis obscure brunneis summo apice aterrimis obsita; asci ovoidei, 2-spori; sporae ellipsoideo-cylindraceae, 4-septatae, rectae, ad septa leniter constrictae, brunneae, utrinque rotundatae, 42-50  $\times$  18-21.

Hab. in foliis Saurauiae elegantis (Dilleniaceae), Isugao et Bontoc, Luzon, Ins. Philipp. (H. S. YATES).

2. Irene anisomera Syd., l. c. p. 194. — Hypophylla, plagulas aterrimas 4597 2·10 mm. latas (v. ultra?) formans; mycelium ex hyphis densissime intertextis valde ramosis septatis (articulis 15·20 μ longis) obscure brunneis 6,5·8,5 μ crassis compositum; hyphopodia capitata copiosa, alternantia 16·23 μ longa, integra, recta vel recurvata, cellula superiore 10·13 μ lata, inferiore angustiore et minore; hyphopodia mucronata non visa; setae nullae; perithecia irregulariter distributa, sparsa vel aggregata, globosa, atra, 150·180 μ diam. asci bispori, elliptici; sporae oblongae vel cylindraceae, rectae vel inaequilaterae, utrinque rotundatae, 3-septatae, constrictae, obscure castaneo-brunneae subopacae, 48·52 ≈ 15·19, cellulis extimis multo minoribus (ca. 9 μ), mediis duplo longioribus (ca. 17·18 μ) et amplioribus.

Hab. in foliis Podocarpi costati (Coniferae), Mt. Banahao, Laguna, Luzon (H. S. YATES).

3. Irene Nephelii Sacc., Notae Mycol. XXIV (Bull. Orto bot. Napoli, 4598 1918) sub Meliola, p. 4. — Coloniis minutis, epiphyllis, sparsis, 2 mm. diam., raro confluentibus, nigricantibus tenuiter velutinis; subiculi hyphis e peritheciis singulis exquisite radiantibus 270-325 × 8-9, repetite patenti ramosis, brunneis; hyphopodiis brevibus, bilateralibus, copiosis, ovoideis, obtusis, bicellularibus, 8-10 × 6, nonnullis apice acutatis; peritheciis globulosis, 145 μ diam., vix colliculosis, nigricantibus; ascis jam resorptis; sporidiis tereti-oblongis utrinque rotundatis, 30 × 12, constrictulo-4-septatis, fuligineis.

Hab. in foliis Nephelii cappacei (Sapindaceae), in Horto bot. Singapore (BAKER). — Setulae nullae visae, hine ad novum

genus Irenem spectat potius quam ad Meliolam.

- MELIOLINA H. et P. Sydow, Ann. Mycol. XII, 1914, p. 553 (Etym. a Meliola cui proxime affinis). - Characteres Meliolae, sed defectu hyphopodiorum diversum.
- 1. Meliolina radians H. et P. Sydow, Ann. Mycol. XII, 1914, p. 553.— 4599 Hypophylla, plagulas 1-2 cm. latas valde velutinas atras aspectu radiantes v. dendriticas formans; mycelio ex hyphis dilute brunneis remote septatis parce sed irregulariter ramosis saepe torulosis v. varie curvatis formato; setis mycelicis numerosissimis, erectis, superne valde dendritico-ramosis, inferne 7-9 µ cr. et opacis, ad apicem in ramos 2.3 primarios divisis; ramis his in ramos secundarios iterum ramulos plus minus longos (subinde usque 80 µ longos) gerentes divisis; apicibus ramulorum dilute et pellucide brunneis; peritheciis solitariis, omnino inter setas absconditis, globosis. 175-250 μ diam.; ascis plerumque bisporis; sporidiis 3 septatis, constrictis, obscure castaneo-brunneis, 42-54 µ long., cellulis duabus extimis ca. 10 µ longis, duabus mediis majoribus ca. 15-20 µ longis-

Hab. in foliis Eugeniae xanthophyllae (Myrtacene) Montalban pr. Rizal, Luzon, Ins. Philippin, (M. RAMOS). - Secundum Anctores hoe genere pertinent Meliola cladotricha Lev., M. pulcherrima Syd. (in Eugenia Jambolana nec in Ficus benjamina ut in Fungi exot. exs. n. 124), M. arborescens Sydow.

2. Meliolina Yatesii Syd., Ann. Mycol., 15. 1917, p. 195. - Hypophylla, 4600 plagulas 0,5-2 cm. latas saepe confluentes tunc irregulares et majores velutinas crassas atras formans; mycelium ex hyphis longis non vel parce ramosis saepe lateraliter connexis pellucide brunneis remote septatis 7-9 μ crassis hyphopodiis destitutis compositum; setae mycelicae copiosissimae, erectae, rigidae, 250-320 µ longae, basi 8-10 µ crassae, opacae eadem ramificatione ut in Meliolina arborescente et Mel. pulcherrima; perithecia sat numerosa inter setas abscondita, globosa, 200-250 µ diam., astoma, aterrima, asci crasse clavati vel saccati, 110-150 \* 35 40, octospori; sporae oblongatae, utrinque rotundatae, 3-septatae, ad septa plerumque fortiter constrictae, brunneae, 55-65 \* 18-20, loculis valde inaequalibus, duobus extimis 11-14 μ longis et 10-12 μ latis, duobus mediis  $18-22 \mu$ , longis et  $17-20 \mu$  latis.

Hab. in foliis Viburni (?) sp. (Caprifoliaceae), Mt. Banabao, prov. Laguna, Ins. Philipp. (H. S. YATES).

3. Meliolina malacensis Sacc., Notae Mycol. XXIV (Bull. R. Orto bot. 4601

Nap. 1918) p. 5, sub *Meliola*. — Coloniis hypophyllis, modo minutis 2-3 mm. diam., modo confluendo usque ad 1-2 cm. lat., ambitu irregularibus, nigricantibus, velutinis; subiculi hyphis repeatibus parcis laxe anastomosantibus, ergo obsolete reticulatis, septulatis, brunneis, sine hyphopodiis, setulis copiosis mycelialibus et perithecialibus, simplicibus, septatis, acutis, 300-350 \*5-5,5, rectis; peritheciis globulosis, astomis, deorsum setulosis,  $250-300 \mu$  diam., contextu minute parenchymatico atro-fuligineo; ascis oblongo-clavatis, apice rotundatis, deorsum tenuato substipitatis, 80-90 \*25-30, paraphysibus bacillaribus, facile diffluentibus obvallatis, 4-8-sporis; sporidiis distichis ovato-oblongis, 3-septatis, ad septum medium leviter constrictis, 35-45 \*12-15, fuligineis.

Hab. in foliis adhuc subvivis Wormiae suffruticosae (Dilleniaceae), in Horto bot. Singapore (BAKER). — Hyphopodiis deficientibus ad novum genus Meliolinam spectat.

4. Meliolina arborescens Sydow, Ann. Myc. XII, 1914, p. 553, Meliola 4602 arborescens Syd. in Leaflets of Philipp. Bot. VI (1913) p. 1923.— Plagulas atras circulares vel irregulares hypophyllas, 0,5-1,25 cm. longas, aterrimas, velutinas efformans; mycelio ex hyphis longis, non vel parce ramosis, pluribus lateraliter connexis, brunneis sed pellucidis, remote septatis (articulis 20-40 μ longis) 7-8 μ crassis, hyphopodiis destitutis composito; setis mycelicis numerosissimis, erectis, rigidis, 300-420 \* 8-10, opacis, in parte superiore in 2-3 ramos primarios subrectos vel saepius repandos aut recurvatos divisis, ramis his in ramos secundarios iterum divisis; ramis secundariis sese divisis et ramulos ultimos erectos vel repandos, longiusculos, 35-70 × 3,5-6, apice leniter attenuatos vel obtusos, pellucide brunneolos usque subhyalinos gerentibus; peritheciis raris, intra setis absconditis, magnis, 300.450 µ diam., globosis, aterrimis, contextu opaco; ascis ovato-ellipsoideis, 1-2-sporis, fugacibus; sporidiis oblongis, utrinque rotundatis, 3-septatis, ad septa valde constrictis, obscure castaneo-brunneis, 42-60 > 16-22, loculis duobus extimis multo minoribus glebulosis v. hemisphaericis 10-12 µ altis, duobus centralibus majoribus 17-22 µ longis et latis.

Hab. in foliis vetustis Eugeniae globosae (Myrtaceae), Todaya, Mt. Apo, Mindanao, ins. Philipp. (A. D. E. ELMER). — Species perdistincta, pulchra, facile dignoscenda.

Meliolina pulcherrima (H. et.P. Sydow) H. et P. Sydow, Ann. Myc. XII, 4603 1914, p. 553, Meliola p. H. et P. Sydow, Ann. Mycol. XI, 1913, p. 254, fig. I. — Hypophylla, aterrima, crassa, densissima, velutina, primitus

maculas orbiculares 3-10 mm. diam. dein confluendo irregulares et majores efformans, fere omnino ex setis mycelicis densissime stipatis constans; mycelio parco, rudimentari, ex hyphis fusco-brunneis 7-9 µ crassis ramosis remote septatis longitudinaliter conjunctis v. anastomosantibus composito, hyphopodiis nullis; setis mycelicis innumeris, erectis, rigidis, 350-425 µ long, basi 7-9 µ cr., remote septatis, atris, opacis, superne bi-trifidis et dilutioribus, quoque ramo ramulos 2 vel 3 plerumque longissimos emittente, ramis ramulisque plus minus late patentibus et saepe etiam recurvatis, apicibus ramulorum dilute coloratis saepe subhyalinis, obtusis saepeque etiam leniter dilatatis; peritheciis paucis inter setas absconditis, vix visibilibus, globosis, atris, 175-350 µ diam., contextu opaco, basi hyphis plerumque simplicibus usque 130 µ long, cinctis; ascis ovatooblongis usque crasse clavatis, 55-100 × 30-40, 6-sporis, sporidiis tristichis, oblongis, triseptatis, non vel vix constrictis, utrinque late rotundatis, brunneis, 48.58 × 12-16.

Hab. in foliis vivis Eugeniae Jambolanae (Myrtaceae), Antipolo prov. Rizal, Luzon, ins. Philipp (M. RAMOS).

6. Meliolina naplochaeta Syd., Ann. Mycol. 15., 1917, p. 145. — Hypo 4604 phylla, plagulas minutas discretas rotundatas, 1-2 mm. diam. velutinas aterrimas formans; mycelio ex hyphis breviusculis fuscidulis flexuosis simplicibus v. parce ramosis, 4-5 μ cr. remote septatis haud hyphopodiatis composito; perithecia paucis in quaque plagula, 150-180 μ diam.; setis circa perithecia dense stipatis, copiosis, simplicibus, erectis, 200-300 × 5-7, obscure brunneis, ad apicem plerumque rotundatis, rarius leniter tenuatis; ascis oblongis v. oblongo-ovoideis, breviter pedicellatis, 6-8-sporis, 80-130 × 35 45; sporidiis 2-3-stichis, oblongis, 3-septatis, non v. leniter constrictis, fuscis, 40-55 × 16-20, utrinque utplurimum tenuatis, apicibus obtusis, loculis extimis multo minoribus, subinde minutissimis.

Hab. in foliis Metrosideri polymorphae (Myrtaceae), Nuuanu Pali, Oahu, ins. Sandwicensium (H. L. Lyon).

mELIOLINOPSIS Beeli, Bull. Jard. Bot. Etat Bruxelles v. 7., 1920, 4605 p. 101, 102 (Etym. a Meliola et opsis quia proximum).—Asci persistentes, cylindracei, plerumque 8-spori, plerumque paraphysati.

Huc ducendae sunt secund. BEELI: Meliola Quercinopsis var. megalospora Rehm, M. hyalospora Lév., manaosensis Henn., iquitosensis Henn., Uvariae Rehm, ? clavatispora Speg., Yatesii Syd., callosperma Speg., quercina Pat., anomala Tracy et Earle, curviseta Rac., cla-

vispora Pat., haplochaeta Syd., Theobromae Fc. v. Faber, Tetradeniae Berk., octospora Cke.

- EUANTENNARIA Spegaz, Fungi Costaric. nonn., Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 187. Subiculum ex hyphis torulosis pro parte repentibus pro parte erectis intricatisque compositum, hyphopodiis destitutum; perithecia inter hyphas nidulantia globosa astoma membranaceo-coriacella parenchymatica atra glabra v. basi hyphis paucis radiantibus ornata; asci 2-8-spori; sporae majusculae fusoideo-cylindraceae 2-5 septatae fuligineae. A Meliola, cui peraffinis, recedit subiculi fabrica nec non hyphopodiorum deficientia.
- 1. Euantennaria tropiciola Spegaz., l. c. cum icon.— Late effusa ater- 4606 rima, primo tenuis araneosa dein plus minusve crassa subpannosa, hyphis erectis 0,5-2,5 mm. alt. subsimplicibus, dense articulatis, articulis subglobosis 10-15 × 12-14; peritheciis majusculis 250-300 μ diam. glabris; ascis saepius tetrasporis, 60-65 × 30; sporidiis subfusoideis 5-septatis non v. vix constrictis fuligineis sed pellucidis laevibus. 35-40 × 10-13.

Hab. in foliis vivis Miconiae cujusdam, in silva La Palma Costarica, America trop. (Prof. H. PITTIER).

## Sect. 6. - Scolecosporae

- OPHIOMELIOLA Starb. Syll. XVI p. 416, XXII p. 57. Secundum Theissen et Sydow, Ann. Myeol. XV, 1917, p. 467, typus huius generis, sive Ophiom. Lindmani Starb., ad Pseudosphaeriaceas adscribenda.
- 1. Ophiomeliola Bomplandi Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4607 Buenos Aires XXIII p. 46 (1912). Maculis nullis; peritheciis hypophyllis, sparsis, minutis, sublenticularibus, 150 μ diam., astomis, nigris, membranaceis, setis tenuibus, patentiusculis, simplicibus, rectis vel vix flexuosis, 100-300 × 3-4, olivaceis, apice subhyalinis, 2-4-septatis conspersis, excipulo parenchymatico-sinuoso, majusculo, olivaceo-opaco; subiculo parcissimo ex hyphis tortuosis 3-4 μ cr. cinetis; ascis cylindraceis, apice rotundatis, basi breviter cuneato-pedicellatis, 70-90 × 10-12, paraphysibus parcis filiformibus vix longioribus cinetis, octosporis; sporidiis filiformibus, utrinque obtusiusculis, 60-70 × 3, septis 3-5 praeditis, ad septa non constrictis, olivaceis.

Hab, in foliis vivis Colleae sp. (? Compositae, ? Leguminosae), in pratis prope Bompland, Misiones: Argentina (P. JÖRGENSEN).

- RIZALIA H. et P. Sydow, Ann. Mycol. XII, 1914, p. 546. (Etvm a loco natali). - Perithecia superficialia, irregulariter globosa v. ovata, diu clausa, tandem vertice irregulariter aperta, mycelio parco ex hyphis fuscis composito et setas erectas v. suberectas gerente haud hyphopodiato insidentia, minuta, extus (praecipue superne) setis paucis irregulariter obsita, pariete crasso grumoso haud parenchymatico. Asci clavati, aparaphysati, sessiles, octospori. Sporidia elongato-filiformia, hyalina, 1-septata.
- 1. Rizalia fasciculata H. et P. Sydow, Ann. Mycol. XII, 1914, p. 546, 4608 fig. 1. - Peritheciis sparsis v. laxe aggregatis, superficialibus, irregulariter globosis, usque irregulariter ovatis, 65-105 µ altis 45-70 μ latis, basi hyphis mycelicis cinctis v. potius suffultis, extus (praecipue parte superiore) setis paucis obtusis, primo clausis, tandem vertice subostiolatim apertis, pariete crasso (6-8 µ), fuscis, contextu grumoso-coriaceo (haud celluloso) tenaci; mycelio parce evoluto ex hyphis brevibus fuscis constante, setas erectas obtusas fuseas 3-5-septatas, 50-90 \* 4-6 gerente; ascis fasciculatis, clavatis, rotundatis, numerosis (20-30) in quoque perithecio, sessilibus, aparaphysatis, 26-32 × 9-11, octosporis; sporidiis parallele fasciculatis, elongatis, plerumque plus minus inaequilateris, subinde fere falcatis, utrinque parum attenuatis, hyalinis, medio 1-septatis, primo minute guttulatis, ascorum fere longitudine, 25-29 × 1,5-2.

Hab. parasitica in Microthyriace a quadam indet., ad folia Diospyri sp. (Ebenaceae), pr. Rizal, Ins. Philippin. (M. RAMOS).

- TRICHOSPERMELLA Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII p. 38 (1912). - (Etym. thrix, thricos et sperma, ob sporidia filiformia). - Perithecia superficialia, ostiolata, glabra, subiculo parco, donata. Asci cylindracei, aparaphysati, octospori. Sporidia filiformia hyalina.
- 1. Trichospermella pulchella Speg., loc. cit., cum ic. Peritheciis spar- 4609 sis, hypophyllis, ex tomento erumpentibus, aterrimis, globosis, 250-300 µ diam., valide umbonato-vel subcylindraceo-ostiolatis, subiculo parcissimo ex hyphis gracilibus, 2-4 µ cr., dense irregulariterque ramulosis, hyalinis vel chlorinis efformato adnatis; ascis clavatofusoideis, apice late obtuseque rotundatis deorsum sensim attenuatis, breviter pedicellatis, 100 \* 8; sporidiis filiformibus, utrinque rotun-

datis, multiguttulatis, hyalinis, 75-80 × 1-1,5.

Hab. in foliis vivis Cestri pubescentis (Solanaceae), in nemoribus prope Santa Ana, Misiones: Argentina.

#### PERISPORIEAE DUBIAE V. INCERTAE SEDIS

- LANOMYCES Ern. Gäumann, Ann. Jard. Bot. de Buitenzorg, v. XXXII, 1.° P., p. 46. Mycelio intramatricali v. superficiali, lanato, brunneo; peritheciis globosis, astomis, flavis parenchymaticis; ascis singulis in peritheciis nascentibus, magnis, multisporis; sporidiis hyalinis unicellularibus. Sec. Auct. « hoc genus inter Perisporiaceas maxime segregatum, nam adhuc sola species est quae hyphis ascogenis caret, ubique perithecia ascum solum, magnum multisporum in se continent. Forte quaedam analogia inter Erysiphaceas et Perisporiaceas esse potest... ».
- 1. Lanomyces tijbodensis E. Gäumann, l. c. Amphigena; mycelio arachnoideo dein lanuginoso, persistenti, primum flavo, demum vetustate fulvo v. atro; peritheciis minutissimis, singulis v. gregariis in mycelio superficiali insidentibus, plus minusve sphaeroideis, peridio tenui praeditis, flavis monascis, 110-230  $\mu$  diam.; appendicibus creberrimis longissimis filiformibus, simplicibus v. ramosis, sursum flexis; sporidiis copiosis ovato-cylindraceis, hyalinis, multinucleatis, 15-28  $\times$  10-16, levibus.

Hab. in foliis Castaneae argenteae Bl. (Fagaceae), in silva primaeva prope Tjibodas, Java.

- RHIZOGENE Sydow, Ann. Mycol. 18., 1920, p. 181. Stromata orbiculariter dense aggregata, superficialia, atra, hypostromate communi subcuticulari, hyphis liberis parallelis verticalibus suffulta; loculi ad marginem stromatis evoluti, omnino immersi; asci sporaeque adhuc tantum immaturi visi.
- 1. Rhizogene Symphoricarpi (Sydow) Sydow, l. c., Lasiobotrys Symphoricarpi Sydow, Ann. Mycol. 16., 1918, p. 244. — Amphigena; sclerotia in greges orbiculares 1-1,5 mm. diam. laxe disposita, sese non vel vix attingentia, orbicularia vel orbiculari-turbinata 240-350 μ diam., usque 150 μ alta, circumcirca crusta atra praedita, intus viridulo-albida, e cellulis 8-10 × 6-8 metientibus contexta, subtus hyphis flexuosis 2-3 μ crassis subhyalinis fulta, hypostromate denso atro-brunneo; perithecia sporaeque non visa.

Hab. in foliis vivis Symphoricarpi spec. (Caprifoliaceae), San Juan Mts., Colorado, America bor.

# Subfam. 5. Capnodieae SACC.

Dispositio secundum Cl. SPEGAZZINI in l. c.

		expansa-corniformia simplicia v.	
1.	Perithecia	ramosa, sporidia muralia colorata	CAPNODIUM Mntgn.
		subglobosa	2.
2.	Ostiolum	( attenuatum	<b>3.</b>
		plane v. vix umbenate	6. d
		elongata filiformia, v. fere pluri-	
3.	Sporidia	septata olivacea	OPHIOCAPNODIUM Speg. n. gen.
		brevia, plus minus ellipsoidea	4.
4.	Sporidia	( 1-locularia, colorata	CAPNODIOPSIS Hug.
		2-locularia, chlorina	<b>5.</b>
5.	Os ostioli	nudatum nec conidiferum	RHYNCHOMELIOLA Speg.
		conidiis praeditum	HENNINGSOMYCES Sacc.
6.	Perithecia {	pubescentia, pilosa v. hispida	7.
		omuino glabra	11.
7.	Sporidia	2-locularia	8.
		multilocularia	9.
8.	Sporidia	hyalina	PERISPORIOPSIS Hng.
		olivacea	ACANTHOSTOMA Thsz.
9.	Sporidia	( elongata, subfiliformia, chlorina	OPHIOMELIOLA Strb.
		brevia, non filiformia	10.
10.	Sporidia	transverse tantum septata	HYPOCAPNODIUM Speg. n. gen.
		transverse et longitud. septata	CAPNOPHAEUM Speg. n. gen.
		pedicello elongato simplici v.	
11.	Perithecia	ramoso	12.
		sessilia v. subsessilia	14.
12.	Sporidia	1-locularia, subglobosa	CAPNODIELLA Sacc.
		multilocularia	13.
		transverse tantum septata,	
13.	Sporidia	hyalina	CAPNODINA Sacc.
		transverse et long. sept., olivacea	PARACAPNODIUM Speg.
14.	Sporidia	elongata filiformia	PSEUDOMELIOLA Speg.
		brevia nec filiformia	15.
		continua, hyalina (= Guignar-	
15.	Sporidia	diella Sacc. et Syd.)	PILGERIELLA Hng.
		1-pluriseptata	16.
16.		transverse tantum septata	ka <b>17.</b> ka kanana ka
		transverse et longit. septata	21.
		septum unicum medium, sporid.	그런 전 집에 모르다는 물론이 되었다고
17.	Septa	hyalina	CAPNODINULA Speg. n. gen.
		septa plurima	18.
18.	Sporidia	hyalina	19.
		colorata	20.
		유럽하다 공급하는 경우하는 그리다는 그리고 있다.	사람보통 이 사는 가게 하는 것은 나가는 사람은 것이다.

19. Perithecia setulis circumdata omnino nuda

omnino n 8-speri 16-speri

21. Sporidia | hyalodictya | phaeodictya

20. Asci

MICROTYLE Speg. n. gen.

LIMACINIA Neg.

METACAPNODIUM Speg. n. gen.

CAPNODARIA Sacc. ZUKALIOPSIS Hng. LIMACINULA Sacc.

Dispositio sec. Theissen et Sydow, Ann. Mycol. 15., 1917, p. 471 (nec Theissen, in Verh. zool.-bot. Ges. Wien. 66., 1916, p. 363).

- A. Perithecia pedunculata v. varie verticaliter conformata, parietibus plerumque ex hyphis meridianis constitutis (EUCAPNODIEAE Th. et Syd.)
- I. Sporidia transverse tantum septata, 4-plurilocularia.
  - 1. Sporidia hyalina
    - a) Mycelio perisporioideo, crasso, spugnoso hyphis gelatinosis contexto
    - b) Mycelio dematiaceo, membra-
  - Sporidia brunnea, asci saepe polyspori
- II. Sporidia muriformia
  - 1. Hyalina
  - 2. Brunnea

- 1. SCORIAS Fr.
- 2. ANTENELLA Th. et Syd.
- 3. CAPNODARIA Th. et Syd.
- 4. PARACAPNODIUM Speg.
- 5. CAPNODIUM Mont.
- B. Perithecia insidentia (raro hyphis basilaribus stipitata), globosa, dematiacea (Chaetothyrieae Theiss.)
- I. Mycelium et perithecia superficialia libera
  - a) Setulae praesentes
    - Sporidia hyalodidyma
      - Perithecia levia, tenui membranacea, pallida; mycelio setulis longis tortuosis praedito.
      - β) Perithecia molli-coriacea, obscura; perithecia et mycelium breviter setulosa
      - Perithecia tenui-membranacea, obscura, typice apice tantum monosetulosa; mycelio setuloso
- 6. DIMEROSPORINA V. Höh.
- 7. CHARTOTHYRINA Theiss.
- 8. CERATOCHAETE Syd.

- 2. Sporidia phaeodidyma
  - a) Mycelium exyphopodiatum
    - (1) Perithecia monasca
    - (2) Perithecia polyasca
  - β) Mycelium exyphopodiatum
- 3. Sporidia hyalophragmia
  - a) Setulae peristomales tantum praesentes
  - β) Setulae peritheciales v. mycelicae praesentes
- 4. Sporidia phaeophragmia
- 5. Sporidia hyalodictya
- 6. Sporidia filiformia
- b) Setulae nullae
  - 1. Sporidia hyalodidyma
  - 2. Sporidia phaeodidyma
    - a) Perithecia monasca
    - β) Perithecia polyasca
  - 3. Sporidia hyalophragmia
  - 4. Sporidia phaeophragmia
  - Sporidia e hyalina pallide phaeodictya
  - 6. Sporidia atro-phaeodictya
- II. Mycelium v. perithecia immersa
  - a) Mycelium subcuticulare, perithecia libera, sporidia phaeodidyma
  - b) Mycelium liberum, perithecia pede centrali infixa; sporidia hyalodidyma

- 9. BALLADYNA Rac.
- 10. BALLADYNOPSIS Theiss, et Syd. n. gen.
- 11. NEOHOENELIA Theiss, et Syd. n. gen.
- 12. AITHALODERMA Syd.
- 13. CHAETOTHYRIUM Speg. (= Zuckalia Sacc., Chaetasterina Bub.)
- 14. SETELLA Syd.
- 15. TREUBIOMYCES V. II.
- 16. ACTINOCYMBE P. Henn.
- 17. CALYPTRA Th. et Syd. n. gen.
- 18. BALLADYNELLA Th. et Syd. n. gen.
- HENNINGSOMYCES Sacc.
   (= Dysrhynchis Clem. 1909)
- 20. LIMACINIA Neg.
- 21. PHRAGMOCAPNIAS Th. et Syd. n. gen.
- PHAEOSACCARDINULA P. Henn.
   Tephrosticta Syd. = Capnites Th.
   Limacinula Sacc. = Phaeopeltis Clem.)
- 23. Coccodinium Mass. (Nactrocymbe Körb.)
- 24. KUSANOBOTRYS P. Henn.
- 25. Adelorus Th. n. nov.
  (= Cryptopus Theiss., nec Lindl., Orchid.)

#### GENERA DUBIA:

Sporidia phaeodidyma: asci 8-spori (Lizonia De Not.); asci 16-spori (Pseudo-lizonia Pir.).

Sporidia phaeophragmia (Asteridiella Mc Alp.).

#### GENERA REMOVENDA.

Antennullaria Rehb. (= Antennaria LK).

Apiosporium Kze.

Capuodiella Sacc. 1905 = Sorica Giesenh. 1904 (Syll. XVII p. 621).

Lizoniella (P. Henn.) Sacc. = Sphaeriaceae.

Capnodiopsis P. Henn. = Agyricae.

Seuratia Pat. = Atichia Flot. (Syll. XXII p 769): Saccharomycetaceae.

Perisporiopsis P. Henn. = Pseudosphaeriaceae.

Zukaliopsis P. Henn. = Myriangeae.

### Sect. 1. Hyalodidymae

DIMEROSPORINA v. Höhnel, Fragm. z. Mykol. n. 610, 1909; Theissen et Sydow, Ann. Myc. 15., 1917, p. 474. — Syn. Dimerosporiella v. Höhn. nec Spegazzini, Syll. XXII p. 29.

1. Dimerosporina Dinochloae Syd., Philipp. Journ. of Sc., v. 9., Sect. 4612 C., n. 2, 1914, p. 161. - Epiphylla, maculas minutas parum perspicuas rotundatas 2-4 mm. latas tandem confluentes atro-griseas formans; subiculo superficiali, parce evoluto, ex hyphis brevibus cellulosis (cellulis ca. 8-12 µ long. v. latis) conidia helminthosporioidea obclavata 4.6 septata non constricta flavidulo-fuscidula 55-75 µ longa 11-14 \mu lata, crasse tunicata (membrana 2-3 \mu crassa) generantibus composito, fusco, ubique setis numerosis erectis rectis vel vix flexuosis apice semper obtusis atro-olivaceis 100-220 µ longis 9-11 µ latis septatis (articulis 15-25 µ longis) obsito; pycnidiis numerosis, primitus globulosis, dein oboyatis, stipitatis, spermatia minutissima hyalina 2 µ longa 1 µ lata includentibus; peritheciis eadem forma et magnitudine ac pycnidiis, pedicello brevi crasso 5-20 µ longo 5-10 µ lato suffultis, primitus globoso-clausis, dein obovatis, et imperfecte ostiolatis, 40-50 µ diam., contextu tenaci olivaceo-fuligineo ex cellulis 6-8 µ diam. composito; ascis sporidiisque nondum maturis.

Hab. in foliis Dinochloae scandentis (Graminaceae), Palawan, Mount Capoas, Taytay, Ins. Philipp. (MERRILL).

2. Dimerosporina pusilla Syd., Enum. Philipp. Fungi I, in Philipp. 4618
Journ. of Sci. VIII (1913) p. 269. — Epiphylla, sparsa, maculas
minutissimas oblongas, <sup>1</sup>/<sub>3</sub>-1 × 0,1-0,2 mm., atras formans; subiculo
superficiali, tenui, membranaceo, parce evoluto, celluloso, ubique
setis numerosis erectis, rigidis, opacis, obscure fuscis, ad apicem
obtusis leniterque dilatatis, 2-3-septatis, 40-55 × 5-8 obsito; peritheciis numerosis, globulosis vel globoso-obpiriformibus, 35-60 μ altis, 25-50 μ latis, basi late rotundatis et hypha brevissima suffultis, superne etiam rotundatis et primo clausis, tandem imperfecte ostiolatis, contextu tenaci olivaceo-fuligineo ex cellulis po-

lygonalibus 5-8 µ latis composito; ascis pluribus, 4-8, in quoque perithecio, ovatis, antice crasse tunicatis, aparaphysatis, 20-28 \* 16.20, octospolis; providiis conglobatis, oblongis, utrinque rotundatis, medio vel circa medium 1-septatis, non vel vix constrictis. hyalinis,  $15-18 \approx 3,5-4,5$ .

Hab. in foliis vivis Lophatheri gracilis (Graminaceae). Polillo, Mt. Malulud, ins. Philipp.

- CHAETOTHYRINA Theissen, Ann. Mycol. 11., 1913, p. 495, 496. My- 4614 celium dematiaceum. Perithecia insidentia, globosa, polyasca. Setulae peritheciales v. mycelicae praesentes. Sporidia byalodidyma. -Typus Chaetothyrina Musarum (Speg. ut Chaetothyrium) Theiss.
- CERATOCHAETE Syd., Ann. Mycol. 15., 1917, p. 179. Mycelium super. ficiale, ex hyphis brevibus dense ramosis et anastomosantibus crustacee conjunctis compositum, circa perithecia setigerum. Perithecia globosa, astoma, contextu fusco parenchymatico unistratoso, ad apicem setula 1 vel rarius 2-3 longis rigidis praedita. Asci octospori, aparaphysati. Sporae hyalodidymae, oblongo-ellipsoideae vel ovatae.
- 1. Ceratorhaete philippinensis Syd., Ann. Mycol. 15., 1917, p. 179. Am. 4615 phigena, plagulas tenues laxas interruptas irregulares formans; mycelium crustaceum, ex hyphis brevibus densissime ramosis anastomosantibusque pelliculae ad instar conjunctis fuscidulis 6-7 u crassis compositum, haud hyphopodiatum, hinc inde, praecipue circa perithecia setulas simplices erectas rigidas usque 450 µ longas fuscidulas obtusas ad apicem saepe dilutiores usque subhyalinas 6,5-8 µ crassas remote septatas crasse tunicatas gerens; perithecia gregaria, sessilia, globosa, 60-100 µ diam., astoma, ad verticem plerumque setula singula (rarius setulis 2-3) erecta rigida fusca obtusa septata 50-200 µ longa 6,5-8 µ crassa gerentia, contextu fusco unistratoso paranchymatice e cellulis 9-11 µ diam. composito, ca. 5-10 ascos includentia; asci brevissime pedicellati vel fere sessiles, ovatooblongi usque oblongi, 45-50 \* 18-24, octospori, ad apicem incrassati et rotundati, aparaphysati; sporae 2-3-stichae, oblongo-ovatae vel ovato-ellipsoideae, utringue rotundatae vel ad basim subinde leniter attenuatae, medio septatae, non constrictae, hyalinae, 18-22 \* 7-9.

Hab. in foliis subemortuis graminis cujusdam, pr. Rizal, Ins. Philipp. (H. S. YATES).

- CALYPTRA Theiss. et Sydow, Ann. Mycol. 15., 1917, p. 478. Mycolium dematiaceum membranaceum, non setulosum. Perithecia insidentia, globosa, levia, dematiacea mucosa, ostiolo indistincto. Asciclavati, fasciculati, octospori. Sporidia hyalodidyma, ex elongata fusoidea. Typus sistit Calyptra cordobensis (Speg.) Th. et Syd., et C. capnoides (Ell.) Th. et Syd.
- ADELOPUS Theiss. nom. nov., in Theiss. et Syd., Ann. Mycol. 15., 4617 1917, p. 482. Syn. Cryptopus Theiss. 1914, Ann. Myc. 12., p. 72, nec Lindl. (Orchideae). Mycelium sparse dematiaceum. Perithecia superficialia pede cylindraceo subepidermico praedita, depresse globosa, levia, indistincte ostiolata, coriacea, nigra. Asci basilares, octospori, clavati. Sporidia hyalodidyma. Typus gen. Adelopus balsamicola (Peck sub Asterina) Theiss.
- CAPNODINULA Spegazzini, Notas Mycologicas « Physis » t. IV, 1918, p. 288. Subiculum normale; perithecia subglobosa estiolata non v. vix umbonata, glabra; asci octospori; sporidia hyalodidyma.— Typus generis Capnodinula trichodea (Rehm) Spegaz. l. c. Asterella trichodea Rehm, Syll. XVI p. 1141.
- 1. Capnodinula Tonduzi Spegaz., Fungi Costaric. nonn., in Bol. Ac. 4618
  Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 189, cum icon. Subiculum late effusum tenuiter subpelliculosum nigrum exhyphopodiatum; perithecia solitaria v. hinc pauci-gregaria (3.5), pusilla 75 μ diam. ex hemisphaerico sublenticularia, membranacea parenchymatica, minute umbonato-ostiolata, atro-olivacea, glabra sed basi hyphis nonnullis radiantibus radicata; asci cylindraceo-subclavulati, apice obtusissime rotundati, deorsum sensim in pedicello brevi crassiusculoque attenuati, 25.30 × 10, aparaphysati, octospori; sporae parvae elongato-subellipticae, non v. vix subclavulatae, medio 1-septatae non constrictae, hyalinae, 10-11 × 2,5-3.

Hab. in foliis et in sarmentis vivis Vitis caribeae (Vitaceae), prope San Josè Costarica, America trop.

MICROTYLE Spegaz., Rel. mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, p. 96 et icon. p. 179. — Pulvinuli atri capnodiacei superficiales parvi compactiusculi granuloso-velutini subiculo dematieo exhyphopodiato; perithecia globosa sessilia ostiolatopertusa atra coriacella glabra, ima basi pilis numerosis erectis simplicibus cinctis; asci octospori paraphysati; sporidia angusta,

medio 1-septata, hyalina. — Genus notis plurimis ad Capnodinulam vergens, pulvinulis parvis compactiusculis non diffusis nec relaxatis, peritheciis basi setulis cinctis distinctissimum.

1. Microtyle Bergi Spegaz., l. c. — Maculis nullis; pulvinulis hypo-4619 phyllis inordinate laxeque longitudinalibus, umbrino-fuligineis; peritheciis constipatis late umbilicato-perforatis (20  $\mu$ ), subglobosis 100-150  $\mu$  diam., pilis brevibus, 25-100  $\times$  5, densiusculis erectis obtusis basi cinctis, ascis subfusoideis apice rotundatis deorsum breviter cuneato-pedicellatis, 80  $\times$  8, paraphysibus filiformibus septulatis parum longioribus obvallatis, octosporis; sporidiis fusoideosubacicularibus utrinque acutiusculis, 16  $\times$  3, distichis v. tristichis, ad septum non constrictis.

Hab. ad folia Merostachydis sp. (Graminaceae), Corcovado prope Rio de Janeiro, America austr. (C. BERG). — Habitus Dimerinae Negerianae Thsz. sed ostiolo peritheciorum diversa.

### Sect. 2. Phaeodidymae

BALLADYNA Racib. - Syll. XVI p. 411, XXII p. 41.

1. Balladyna Melodori Syd., Philipp. Journ. of Sc., v. 9. Sect. C., n. 2., 4620 1914, p. 160. - Amphigena, saepius epiphylla, plagulas primitus orbiculares 3-10 mm. diam., atras opacas tandem confluentes et magnam folii partem obtegentes formans; mycelio ex hyphis valde irregulariterque ramosis fuscis vel obscure brunneis 5.9 µ crassis saepius binis trinis lateraliter connatis torulosis irregularibus composito; hyphopodiis alternantibus, irregulariter distributis, continuis, globulosis usque oblongis, fuscis, 8-12 µ longis, 6-9 µ latis; setis mycelicis numerosis, erectis, rigidis 80-110 µ longis, basi 4-8 µ crassis, apicem versus attenuatis et acutis, ad apicem 2-2,5 µ crassis, obscure brunneis, opacis, continuis; peritheciis numerosis, sessilibus vel brevissime stipitatis, globosis usque ovatis vel breviter piriformibus, 50-65 µ altis, 40-48 µ latis, monoascigeris, pariete indistincte parenchymatico sordide olivaceo-brunneo vel sordide flavobrunneo tenaci; ascis globosis vel subglobosis, 40-50 µ longis, 35-40 µ latis, aparaphysatis; sporidiis oblongis utrinque late rotundatis, medio 1-septatis et constrictis, levibus, primitus hyalinis, tandem olivaceo-brunneis, bi-tristichis, 17-19 × 4-4,5.

Hab. in foliis Melodori (Anonaceae), Palawan Taytay, Ins. Philipp. (MERRILL).

2. Balladyna Ledermannii Sydow, Engler' Botan. Jahrbüch. 54., 1916, 4621

p. 254. — Amphigena, saepius hypophylla, plagulas minutas orbiculares, 2-8 mm. latas, atras formans; mycelio ex hyphis tenuibus 3-4  $\mu$  crassis ramosis rectiusculis, sed ramosis et densiuscule intertextis septatis fuscidulis composito; hyphopodiis numerosis, alternantibus, continuis, globosis, v. subglobosis, integris, raro leniter lobulatis, 3-4,5  $\mu$  diam.; setis erectis, rectis vel subrectis, ad apicem obtusis, brunneis, numerosis, praecipue circa perithecia sitis, 50-120  $\times$  4-6, ad apicem vix attenuatis; peritheciis dense stipatis, subsessilibus, globosis, 40-65  $\mu$  diam., 1-pauciascigeris, tenaci-membranaceis, contextu flavo-fusco ex cellulis 4,5-6  $\mu$  latis composito; ascis ovatis, 32-38  $\times$  20-25, octosporis; sporidiis oblongis, utrinque obtusis, pallide olivaceis, crasse et obscurius 1-septatis, 13-16  $\times$  4-4,5, loculo infero subinde parum longiore.

Hab. in foliis vivis Bignoniaceae cujusdam, prope Sepik Nova-Guinea nord.-or., Africae (LEDERMANN).

3. Balladyna Butleri Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, p. 388 4622 fig. 7. - Hypophylla, velutina, maculas atras oblongas 2-10 mm. longas formans; subiculo superficiali, ex hyphis fuscis 8-10 u cr. irregulariter ramulosis anastomosantibusque hyphopodia pauca primitus 1-dein pluricellularia et perithecia immatura obpiriformia gerentibus composito; setis subiculo numerosissimis, erectis, rectis v. subrectis, apice obtusis, fusco-brunneis, opacis, apice dilutioribus, 150-220 μ long., basi 8-10 μ cr., sursum angustioribus; peri theciis numerosissimis, dense stipatis, obpiriformibus vertice breviter obtuseque conicis, basi rotundatis, 50-75 \mu altis medio 45-60 \mu latis, in hyphis cellula stipitiformi lateraliter ortis et quasi stipitatis, praeterea lateraliter circa hanc cellulam hyphis paucis tenuibus suffultis, parenchymatice contextis, pariete sub microscopio dilute brunnea ex cellulis polyedricis 6-10 µ latis superficie tenuiter areolatis composito, circa ostiolum subhyalino, ascis 1-2 tantum includentibus; ascis aparaphysatis, ovatis v. subsphaericis, 30-40 \* 20-35, octosporis, apice crassiuscule tunicatis; sporidiis conglobatis, elliptico-oblongis, utrinque rotundatis, medio 1-septatis et constrictis, diutissime hyalinis, sero dilutissime brunneolis tandemque ut videtur brunneis, 18-22 \* 9.10.

Hab. in foliis Bambusae sp. (Graminaceae), Khasi Hills Assava, Indiae or (E. J. BUTLER)— B. velutinae (B. et C.) v. Höhn. et B. amazonicae v. Höhn. proxima, a prima differt hyphopodiis paucis pariete peritheciorum pallide brunnea, ab altera setulis numerosis, ab utraque colore sporarum.

4. Balladyna uncinata H. et P. Sydow, Ann. Mycol. XII, 1914, p. 546. — 4623 Epiphylla plagulas minutas omnino superficiales oblongas 1-2 mm. longas atras tenues formans; mycelio ex hyphis densissime breviterque ramosis fuscis v. brunneolis 7-9 μ latis, septatis composito; setis numerosissimis ad basim semper plus minus valde uncinatis v. semel etiam sigmoideo-curvatis, ceterum erectis v fere erectis, crasse tunicatis, tota longitudine pellucidis, septatis (articulis 30-50 μ long.), dilute olivaceo-fuscis, ad apicem obtusis, 150-250 × 4-8; peritheciis dense stipatis, sessilibus v. breviter stipitatis, ovato-globosis v. ovatis, superne indistincte ostiolatis, basi late rotundatis, olivaceo-brunneis, tenaci membranaceis, 60-95 μ altis, 50-65 μ latis, plerumque monoascigeris, contextu ex cellulis irregulariter polyedricis 8-11 μ diam. composito; ascis ovato-globosis, aparaphysatis, 35-44 × 30-35; sporidiis parallele positis, ellipsoideo-oblongis, medio 1-septatis et parum constrictis, fuscis, 24-26 × 9-11.

Hab. in foliis languidis Schizostach y i sp. (Graminaceae), Antipolo prov. Rizal, Ins. Philippin. (M. RAMOS).

5. Balladyna affinis Syd., Ann. Mycol. 14., 1916, p. 74. — Epiphylla, pla-4624 gulas orbiculares dein plus minus confluentes 2-8 mm. longas griseas tenues formans; ωycelio parum evoluto, ex hyphis brevibus dense ramosis fuscis 5-8 μ latis composito, hyphopodiis capitatis numerosis, 18-25 μ longis, 8-10 μ latis, obtusis, integris, cellula basali brevi; hyphopodiis mucronatis non visis; setis mycelicis parcissimis, rectis vel subrectis, simplicibus, apice late rotundatis, tota longitudine pellucidis 100-175 × 7-9, superne saepe leniter tortuosis; peritheciis sparsis, globosis, 100-150 μ diam.; ascis ovatoglobosis, 2-3-sporis; sporidiis cylindraceis, obtusis, fuscis, 4-septatis, parum constrictis, 25-30 × 9-12; conidiis obclavatis vel obclavatofusoideis, basi rotundatis fuscidulis 3-septatis, non constrictis, 30-35 × 9-8, cellula superiore longissima et angusta.

Hab. in foliis Cecropiae (Moraceae), Seringal S. Francisco, Rio Acre, Brasiliae (E. ULE). — Affinis Ball. amazonicae.

BALLADYNOPSIS Theiss. et Syd., Ann. Mycol. 15., 1917, p. 475. — 4625 A Balladyna differt peritheciis polyascis nec monascis. — Typus Balladynopsis philippinensis Syd. (sub Henningsomyces).

BALLADYNELLA Theiss et Syd., Ann. Mycol. 15., 1917, p. 478. — 4626 Est Balladyna hyphopodiis et setulis destituta. — Typus gen. Balladynella amazonica (v. Höhn.) Th. et Syd. NEOHOEHNELIA Theiss. et Syd., Ann. Mycol. 15., 1917, p. 476. — 4627 Mycelium membranaceum exhyphopodiatum, setulosum. Perithecia ovoideo-erecta, crasse membranacea, nigra, astoma, breviter pedicellata, setulosa. Asci pauci, ex ellipsoidei clavati, octospori. Sporidia phaeodidyma. — Species typica Neohoehnelia oligotricha (Mont.) Th. et Syd. (sub Henningsomyces v. Höhn.).

#### HENNINGSOMYCES Sacc. - Syll. XVII p. 689.

1. Henningsomyces pusillimus Syd., Philipp. Journ. of Sc., v. 9., Sect. 4628 C., n. 2, 1914, p. 162. - Hypophylla, plagulas orbiculares vel irregulares 1-2 cm. diam. griseo-fumosas formans; mycelio tenuissimo, ex hyphis longiusculis non vel parce ramosis remote sentatis (articulis 30-50 µ longis) dilute olivaceo-brunneis tenuiter tunicatis haud hyphopodiatis, 2,5-3,5 µ crassis, composito; peritheciis in mycelio dense sparsis hyphis superficialiter insidentibus, una vel pluribus hyphis suffultis, globosis vel ovato-globosis, sessilibus vel centro brevissime stipitatis, 30.45 µ diam., haud ostiolatis contextu tenaci obscure olivaceo-brunneo minute parenchymatico ex cellulis 4-5 µ diam. composito, superne setis paucis (4-8) erectis rectis vel subrectis continuis apice acutis fuscis (3.5) in quoque perithecio, globosis usque ovato-globosis, crassiuscule tunicatis, 20-24 µ diam., non vel indistincte paraphysatis, octosporis; sporidiis oblongis, circa medium 1-septatis, vix constrictis, 12-15 µ longis, 3,5-4 µ latis.

Hab. in foliis Adinae sp. (Rubiaceae), Palawan Taytay, Ins. Philipp. (MERRILL).

2. Henningsomyces philippinensis Syd., Philipp. Journ. of Sc. v. 9, Sect. 4629 C., n. 2, 1914, p. 161. — Plagulas epiphyllas opacas atras perexiguas 150-300 μ tantum latas vel etiam confluendo majores et usque 2-3 mm. diam. metientes formans; mycelio superficiali, matrici arcte adnato, ex hyphis longiusculis remote septatis (articulis 20-50 μ longis) obscure olivaceo-brunneis vel atro-olivaceis parum ramosis 5-7,5 μ crassis tenuiter tunicatis composito; peritheciis ad latera hypharum mycelii sessilibus vel brevissime stipitatis, plerumque perfecte globosis et 60-70 μ diam., haud ostiolatis, contextu tenaci minute parenchymatico atro-olivaceo, setis paucis (2-6) rectis vel parum flexuosis ad apicem obtusis concoloribus vel pallidioribus plerumque 20-50 μ longis et 5-6 μ latis obsitis; ascıs paucis in quoque perithecio, ellipticis, ovatis vel oblongis, subsessilibus, 45-50 μ longis, 22-25 μ latis, octosporis, aparaphysatis vel indistincte

paraphysatis; sporidiis tristichis vel conglobatis, oblongis, utrinque rotundatis, medio vel eirca medium 1-septatis et leniter constrictis, ex hyalino brunneis, levibus, 20-25  $\mu$  longis, 7,5-8  $\mu$  latis.

Hab. in foliis vivis Morindae sp. (Rubiaceae), Palawan Taytay, Ins. Philipp. (MERRILL).

### Sect. 3. Hyalophragmiae

SCORIAS Fr. — Syll. I, p. 83.

Scorias paulensis P. Henn., Hedw. vol. 48 (1908) p. 6. — Mycelio 4630 atro crustaceo, epiphyllo, effuso; hyphis repentibus septatis, radiatis, fusco-atris; peritheciis clavatis vel piriformibus, 150-200 × 30-80, e fibris fuscis compositis; ascis clavatis vel oblongo-ovoideis, 4-sporis, 20-30 × 6-8; sporidiis conglobatis, fuscideis vel clavatis, 3-septatis, hyalinis, 10-12 × 3-3,5. Conidia ovoidea vel ellipsoidea, fuscidula, 1-septata, 5-9 × 3-4.

Hab. in foliis Justiciae sp. (Acanthaceae), S. Paulo, Capital, Brasilia.

2. Scorias capitata K. Sawada in Special Rep. Agr. Sper. Station Formosa, n. 11, 1915, pp. 123-124, tab. 4 fig. 19-23, t. 4., ii; Mycologia IX, 1917, p. 170. — Mycelio in foliis late effuso nigricante; hyphis catenulatis, fuligineis, 2,5-5 μ cr.; hyphis fertilibus fuligineis, ramosis, forma variabilibus sed plerumque conoideis, cylindraceis, fusoideis v. ellipsoideis, 110-247 × 52-75, apice constrictis et peritheciis terminatis; peritheciis nigris, subovatis v. orbicularibus, 60-83 × 50-78; ascis numerosis clavatis, obtusis, hyalinis, 30-35 × 9-12, 6-8-sporis; sporidiis e fusoideis clavato-fusoideis, utrinque obtusis, hyalinis, 3-septatis, 10-11,5 × 3-3,5.

Hab. in foliis Theae sinensis (Theaceae), Formosa, Japonia (Y. FUJIKURO).

- HYPOCAPNODIUM Spegazzini, Notas Mycologicas, « Physis » t. IV, 1918, 4632
  p. 287. Subiculum normale; perithecia subglobosa ostiolata, non
  v. vix umbonata, hispidula v. hirsuta; asci 8-spori; sporae hyalophragmiae. H. setosum (Zimm.) Sacc., l. c., XVII, p. 557. Typus.
- AITHALODERMA H. et P. Sydow, Ann. Mycol. XI, 1913, p. 257, XV, 1917, p. 474 (Ethym. aithalos et derma cutis). Mycelium superficiale, crustaceum, facile secedens, atrum, conidia triposporioidea generans. Pycnidia biformia, alia conica v. conico-globosa, alia la-

geniformia. Pycnidiosporae continuae, minutae, hyalinae. Perithecia conica v. conico-globulosa, minuta, atra, ostiolo plano praedita. contextu parenchymatico, tenaci, coriaceo, superne setis crassis obsita; asci crasse clavati, octospori, aparaphysati. Sporidia transverse pluriseptata hyalina.

1. Aithaloderma clavatisporum H. et P. Sydow, l. c. p. 257 fig. III, XV 4633

1917. p. 476, fig. 30, a-d. - Longe lateque effusum, epiphyllum, superficiale, tenuissime pelliculosum, facile secedens, totam folii superficiem obtegens, atrum v. atro-olivaceum, opacum; mycelio rete densissimum efformante, ex hyphis anastomosantibus plerumque longitudinaliter connatis crassioribus 4-6 µ cr. et obscure olivaceis v. brunneis tenuioribus 3-4 µ cr. et plerumque dilutioribus flavis usque flavo-brunneis crebre septatis (articulis 5-10 µ long.) composito, hinc inde conidia triposporioidea plerumque 3-radiata (radiis 28-40 µ long, e 2-septatis) olivaceo-brunnea generante, hyphis paucis etiam in articulos 13-16 µ longos oidiiformiter secedentibus; pvcnidiis biformibus, aliis elongato-lageniformibus, 120-400 µ long. 15-20 μ cr., erectis v. parum curvatis, inferne atris opacis, superne saepe dilutioribus et pellucidis, plerumque ad apicem (subinde etiam in medio) abrupte inflatis ibique 25-40 µ cr.; aliis breviter conoideis 60-90 µ diam., olivaceo-brunneolis, contextu tenaci parenchymatico, superne indistincte ostiolatis; sporulis breviter cylindraceis, continuis, hyalinis, utrinque minute guttulatis, 3,5-5 × 1,5-2; perithecis aequaliter sparsis, breviter conoideis, 60-90 µ diam., atris, tenacibus, coriaceis, distincte ostiolatis, parte superiore (praecipue circa ostiolum) setis paucis v. compluribus crassis atris 10-20 µ long. 3,5-5 µ latis subinde elongatis opacis continuis obsitis contextu parenchymatico, olivaceo-brunneo, ex cellulis 6-8 µ diam. for mato; ascis subclavatis v. subsaccatis, apice obtusis et incrassatis, basi brevissime stipitatis, 30-36 \* 14-20, octosporis, aparaphysatis; sporidiis 3-4-stichis v. conglobatis, clavatis, e basi ad apicem sensim latioribus, 3-4-septatis, subinde etiam 5-septatis, ad septa non constrictis, hyalinis, 24-26 > 5-6.

Hab. in foliis vivis Voacangae globosae (Apocynaceae), Los Baños, ins. Philippinensium (C. F. BAKER).

2. Aithaloderma longisetum H. et P. Sydow, Ann. Mycol. XII, 1914, 4634 p. 545, XV, 1917, p. 475 fig. 30 h. - Epiphyllum, folii superficiem plerumque omnino crusta tenni facile separabili superficiali obducens, pelliculosum, atrum v. atro-olivaceum, opacum; mycelio rete densissimum efformante, ex hyphis anastomosantibus saepe longi-

tudinaliter connatis crassioribus 5-9 µ cr. fuscis v. olivaceo fuscis tenuioribus 3.5 µ cr. et plerumque paullo dilutioribus crebre septatis (articulis 6.10 µ long.) composito, hinc inde conidia triposporioidea plerumque triradiata (radiis 30-46 µ long. et 2-septatis) olivaceo-brunnea generante; pycnidiis elongato-lageniformibus 100-200 u long., 12-20 u latis erectis v. parum curvatis atro-olivaceis opacis non v. parum inflatis; pycnidiis conicis non visis, peritheciis densiuscule sparsis, breviter conoideis, 60-85 µ diam., atro-olivaceis, tenacibus ostiolatis, setis paucis (1-8) atris v. atro-olivaceis opacis septatis 80-160 µ long, ad basim 4-6 µ crassis superne angustioribus obsitis, contextu parenchymatico obscure olivaceo ex cellulis 7-9 µ diam. formato; ascis subclavatis v. saccato-clavatis, apice obtusis, vix v. brevissime stipitatis, aparaphysatis, 30-36 > 17-19, 8-sporis; sporidiis 3-4-stichis, clavatis, e basi ad apicem sensim latioribus, 2-4 septatis, non constrictis, diu hyalinis, tandem dilutissime olivaceis (praecipue in asco), 20-26 \* 4,5-6.

Hab. in foliis Coffeae libericae (Rubiaceae), Lamao pr. Bataan, Luzon Ins. Philippin. (E. D. MERRILL). - Ab A. clavatisporo Syd. setulis longioribus sporis pallide olivaceis diversum.

- CHAETOTHYRIUM Speg. Syll. IX p. 1061, XVI p. 636, XXII p. 521 Syn., sec. Theissen et Sydow (Ann. Mycol. 15., 1917, p. 477), Zuckalia Sacc. 1891, Chaetasterina Bubak 1909.
- 1. Chaetothyrium colchicum Woronichin, Les fumagines du Departe- 4635 ment de Sotshi, in Bull. of Applied. Bot., n. 6, p. 797, tab. 136, fig. 976.979. — Mycelio atro, crustaceo epiphyllo, praecipue rectangulariter ramoso; hyphis saepe paralleliter confluentibus vel crustas parenchymaticas formantibus; cellulis hypharum cylindraceis, ad septa constrictis, usque 12-15 µ longis et 6 7 µ crassis, olivaceobrunneis; peritheciis globosis, leviter compressis, 50.80 µ altis et 60-90 µ latis, crusta parenchymatica hypharum conoidea, ostiolata, corona setarum (8-20) usque 60 µ long. et 7,5 µ crass. unicellularium ornata tectis; ascis late clavatis vel ovalibus, brevissime pedicellatis, 42-52 \* 20-30, aparaphysatis, octosporis; sporis clavatis, parallelibus, 22-27 \* 6, 4-6-septatis.

Hab in foilis vivis Ilicis Aquifolii L. (Aquifoliaceae): soc. Antennulariellae fuliginosae Woronichin: Caucasus, gub. Tshernomorskaja prope Sotshi (N. WORONICHIN); in foliis vivis Citri sp. (Rutaceae), Caucasus, gub. Tshernomorskaja, prope Sotshi (Kush-KE!); in foliis vivis Citri sp., Caucasus, prov. Batum (KUSHKE!).

2. Chaetothyrium Rickianum Theissen, Ann. Mycol. XI, 1913, p. 493, 4636 fig. I, XV, 1917, p. 474, fig. 31. — Epiphyllum. Maculis fumosis irregulariter rotundatis 1 cm. circ. diam. quandoque confluentibus; subiculo tenue hinc inde sub lente prominenti-setuloso, hyphis 3-4  $\mu$  cr. crebre articulato-constrictis, laxis efformato; setis acutato-incurvatis 20-30-articulatis, plerumque 200-240  $\mu$  long.; perithecia aegre visibilia, subiculum elevantia globoso-depressa, usque 200  $\mu$  lata 130  $\mu$  alta, ostiolo 10  $\mu$  lato, hyphis minutis radiantibus ornatoclauso; ascis hymenio basilari efformantibus e cylindraceo clavatis subcylindraceis, 50  $\times$  16 (cum sporidiis 2-3-stichis) v. 65  $\times$  10 (cum sporidiis) (1-2-stichis), aparaphysatis; sporidiis elongato-cllipsoideis hyalinis triseptatis, non constrictis, 12-16  $\times$  3.

Hab. in foliis Dicotyledoneae cujusdam ignotae, Brasilia (RIOK).

ZUKALIA Sacc. — Syll. IX p. 431, XI p. 268, XIV p. 17, XVI p. 416, XVII p. 543, XXII p. 42.

1. Zukalia paraënsis P. Henn., Hedw. vol. 48 (1908) p. 104. — Maculis 4637 mycelii epiphyllis, rotundatis, olivaceo-fuscis; hyphis repentibus ramosis, septatis, fuscis, 4-5  $\mu$  crassis; peritheciis gregariis, subglobosis, verruculosis, atris, 30-100  $\mu$  diam.; ascis clavatis, obtusis, octosporis, 44-52  $\times$  10-14; sporidiis oblique monostichis vel subparallelis, oblonge clavatis, vertice rotundatis, guttulatis, 3-7-septatis, hyalinis, 20-30  $\times$  3,5-4.

Hab. in foliis Anacardii occidentalis (Anacardiaceae), in horto botan. Goeldi, Parà, Brasilia.

2. Zukalia caucasica Woronichin, Les fumagines du Département de 4638 Sotshi, in Bull. of Applied Bot. VIII, n. 6, p. 784 (1915), fig. 962-965, tab. 134 fig. 1. — Mycelio atro, late effuso, crustaceo-mem. branaceo, paginam foliorum superiorem omnino tegente; hyphis brunneis 2-4-stratosis, parce ramosis, praecipue rectangulariter vel cruciatim dispositis; cellulis hypharum cylindraceis vel oblongo-ovalibus, glabris, 18-28 × 6-8 (-10), nonnunquam globosis, toruloideis; conidiis triposporioideis, 4 (-3) radiatis, olivaceis; radiis 5-7-cellularibus superne attenuatis, 65-75 × 12-13,5; perithèciis globosis, parcis, leviter compressis, usque 276 μ diam., membranaceis ostiolatis basi setulis pluricellularibus, 100-150 × 7-10, brunneis ornatis; ascis ovalibus, aparaphysatis octosporis, 60-75 × 30-45; sporidiis hyalinis, fušoideis, obtusis plerumque leviter curvatis, 3-4-septatis, 30-33 × 7-8.

Hab. in foliis vivis Taxi baccatae L. (Coniferae), Caucasus, gub. Tshernomorskaja, prope Chosta (N. Woronichin).

3. Zukalia erysiphina Syd., Ann. Mycol. 14., 1916, p. 259. — Mycelio co. 4689 pioso sed tenui, longe effuso, niveo, ex hyphis longissimis, hyalinis, 3-4 μ cr. vix septatis, flexuosis, crasse tunicatis hinc inde geniculatis, non ramosis composito; peritheciis in mycelio copiosis, superficialibus, plerumque lata basi sessilibus, globoso-conicis, mox longioribus quam latioribus, mox e contra latioribus quam longioribus, 50-75 μ diam., astomis, glabris, levibus, contextu unistratoso ex cellulis angulato-globosis, 6-9 μ diam. obscure olivaceo-brunneis v. castaneo-brunneis composito; ascis paucis (circ. 3-6) in quoque perithecio, globosis v. ovato-globosis, sessilibus, aparaphysatis, 20-28 μ diam., ad apicem crasse tunicatis, octosporis; sporidiis conglobatis, oblongis v. clavulatis, 3-septatis, non constrictis, hyalinis, 12-16 × 3,5-4,5.

Hab. in foliis Quercus sp. (Cupuliferae), Shana Odyar, Kumaon Himalaya, Asiae (BUTLER).

4. Zukalia lauricola Speg, Mycet. Argent. VI, Anal. Mus. Nac. Buenos 4640 Aires XXIII p. 38 (1912). — Peritheciis sparsis vel laxe gregariis, superficialibus, udis subglobosis, siccis eximie hemisphaerico-cupulatis, 150-180 μ diam., membranaceo-coriacellis, astomis, glabris, contextu parenchymatico atro vix pellucido, subiculo parcissimo ex hyphis dense intertextis, articulato-toruloideis (articulis 10-25 \* 5) chlorino-olivaceis efformato insidentibus; ascis ellipsoideis, utrinque angustatis, basi in pedicellum brevem crassumque productis, octosporis, aparaphysatis, 70 \* 18; sporidiis conglobatis, fusoideis, rectis vel leniter inaequilateris, utrinque acutiuscule rotundatis, ad septa valide constrictis, 30 \* 6.

Hab. in foliis vivis O coteae diospyrifoliae (Lauraceae), in silvis prope Calilegua, Salta: Argentina.

5. Zukalia transvaalensis Doidge, Trans. R. Soc. South Afr. V, 1917, 4641 p. 721 et 742, t. 58 fig. 10. — Epiphylla, maculas tenues effusas efficiens; hyphis radiatis, ramosis anastomosantibus, 7-8 μ crassis, e cellulis 30-32 μ longis compositis; hyphopodiis unilateralibus, plerumque latioribus quam longis, 8-10 ≠ 11-14; peritheciis sparsis, numerosis, globosis, atris, 130-160 μ diam.; ascis octosporis, ellipsoideis v. ovatis plerumque leniter curvatis, 70-90 ≈ 18-22; paraphysibus nullis; sporidiis distichis v. trifariis, clavatis, hyalinis, 5-septatis, utrinque obtusis, 45-55 ≈ 5-7.

Hab. in foliis Eugeniae Zeyheri (Myrtaceae), Woodbusch,

Zoutpansberg, Africa austr. (E. M. DOIDGE).

- 6. Zukalia setosa Woronichin, Les fumagines du Département de Sotshi, 4642 in Bull. of Applied Bot. VIII, n. 6, p. 788, tab. 134 fig. 5-6, tab. 136 fig. 966 971. - Mycelio griseo, effuso, crustaceo, epiphyllo: hyphis dilute-brunneis vel hyalinis, plerumque 1-stratosis, ramosis, partim rectangulariter, ramulis anastomosantibus vel crustas e cellulis parenchymaticis, 3-4 µ diam. formantibus, setis praeditis; cellulis hypharum plerumque cylindraceis vel oblongo-ovalibus, 7-15 ≥ 3-(5); setis atro-brunneis, rectis vel curvatis, apicibus acutis. 180-230 µ longis, usque 6 µ crassis, hyphis hyalinis usque ad apices setarum arrepentibus, tectis; peritheciis parcis, globosis, ostiolatis statu sicco fere patelliformibus, 220-230 u diam.; ascis oblongo-ovalibus vel cylindraceis, 60-70 × 15-18; sporis octonis, fusoideis, rectis, hyalinis, 19.5-22.5 × 6-7.5, 4-5 septatis; conidiis triposporioideis, parcissimis, 5-radiatis, radiis 3-4 cellularibus, 20-30 µ longis, supra attenuatis, cellulis guttulatis.
  - Hab. in foliis vivis Pruni Laurocerasi L. (Rosaceae), Caucasus, gub. Tshernomorskaja, pr. Chosta; in foliis vivis R h ododendri pontici L. (Ericaceae), Caucasus, gub. Tshernomorskaja, pr. Bahukor (N. WORONICHIN).
- 7. Zukalia europaea v. Höhn., Fragm. zur Mykol. 797, in Sitzgsb. 4643 Akad. Wiss. Wien, CXXII, 1, p. 283 (1913). - Subiculo parum effuso ex hyphis 1-pauci-stratosis, brunneolis, 3-8 μ cr., saepe membranaeco-concrescentibus, brevi-cellulosis, subtorulosis guttulatis composito; peritheciis atris, subglobosis, lata basi subiculo insidentibus, 150-200 µ diam., non collabescentibus, ob papillas atras 10-12 µ diam., dense sparsas scabris, in acervulos parvos congestis, ostiolo minuto obsoleto, contextu pancistratoso, e cellulis rotundato-polyhedricis, usque ad 12 µ diam. composito; ascis copiosis, sessilibus, aparaphysatis, fusoideo-clavatis, apice attenuato-rotundatis, 42-58 × 8-12, octosporis; sporidiis 2-3-stichis, oblongo-fusoideis, rectis, utrinque acutiusculis et gelatinoso-apiculatis, 4-cellularibus, hyalino-chlorinis, 16-20 × 4-5,5.

Hab. in pagina superiore foliorum Rubi fruticosi (Rosaceae), Sonntagsberg, Austria infer. (STRASSER).

8. Zukalia nantoensis K. Sawada, Mycologia 9., 1917, p. 251 (ex Rep. 4644 Agricult. Stat., Taiwan (Formosa) Mart. 1915, p. 123, tab. 4 fig. 14-18). - Pycnidiis et peritheciis epiphyllis, raro hypophyllis in subiculis 2-5 mm. latis, lichenoideis, ex hyphis fuligineis, crasse tunicatis, 8 µ cr. septatis coalescentibus formatis; hyphopodiis ob-

longis, substipitatis 18-25  $\mu$  long. intermixtis; pycnidiis globulosis, nigris, sessilibus v. substipitatis, subiculo insertis, 63-95  $\mu$  diam.; sporulis ellipsoideo-oblongis, levibus, pallide brunneis, 1-cellularibus, 2-guttatis, 6-8  $\times$  3-4; peritheciis similibus 130-180  $\mu$  diam.; ascis copiosis oblongo-clavatis, v. ovoideo-oblongis, 33-50  $\times$  10-12, octosporis; sporidiis oblongis v. breviter clavatis, medio 1-septatis, hyalinis, utrinque obtusis, 9-13  $\times$  3,5-5.

Hab. in foliis Theae sinensis (Theaceae) cui valde noxia, in Ins. Formosa, pluribus locis.

9. Zukalia Theae K. Sawada, Special Rep. Agr. Exp. Station Formosa, 4645 n. 11, 1915, p. 122, tab. 4 fig. 10-13, t. 4., ii; Mycologia, IX, 1917, p. 170. — Peritheciis globosis, nigris, 67-135 μ diam.; subiculo nigro; hyphis filiformibus, primum pallidis, dein brunneis, ramosis, septatis, 3-6 μ cr.; ascis numerosis, setis 6-8 obscure brunneis, obtusis, 5-6 septatis, circumdatis, 70-100 × 4; ascis octosporis, hyalinis, clavatis, fusoideis, 68-90 × 13-16; sporis hyalinis, obovatis, ellipsoideis v. clavatis, 3-septatis, 17-23 × 6-7.

Hab. in foliis et ramulis Theae sinensis (Theaceae), Formosa, Japonia (K. SAWADA).

- LIMACINIA Neger. Syll. XIV p. 474, XVI p. 1127, XVII p. 556, XXII p. 62. Syn. sec. Theissen et Sydow (Ann. Mycol., 15., 1917, p. 478), Xystozukalia Theissen, 1916, Verh. zool.-bot. Ges. Wien, p. 357.
- Limacinia spongiosa Arnaud, Ann. Ecole nat. Agric. Montpell. X, 4646
   1911, p. 325, icon. p. 282. Subiculo ramicolo, nigro, spongioso,
   1-5 mm. crasso; peritheciis in mycelio immersis vel erumpentibus, minutis, 150 μ diam., globosis, setosis; ascis tereti-clavatis, 8-sporis, aparaphysatis, plerumque 70 μ longis; sporidiis ellipsoideo-fusoideis, 3-septatis, dilute fuscidulis, 20-26 × 6-9, non v. vix constrictis.

Hab. in ramis Nerii Oleandri (Apocynaceae), Montpellier Galliae merid.

2. Limacinia biseptata Sacc., Ann. Mycol. XIII, n. 2 (1915) p. 127.— 4647 Effusa, imprimis epiphylla, tenuis, confluens, castaneo-olivacea (vix capnodiacea) non vere secedens; hyphis repentibus filiformibus, parce ramosis, dilute fuligineis, 4-5 μ cr., obsolete septatis, gutulatis; peritheciis, globulosis, superficialibus ex hyphis orientibus, demum latiuscule apertis nigricantibus, 90-100 μ diam.; asci clavulatis, subsessilibus, apice subinde obtuse abrupteque tenuatis, 90-100 τ 9, uon v. obsolete paraphysatis, octosporis; sporidiis di-

stichis tereti oblongis, curvulis utrinque rotundatis, 16 × 4,5-5, dilutissime brunneolis, 2-septatis, non constrictis; ceratopycnidiis peritheciis intermixtis, cylindricis, nigris, 300-400 × 80, sursum sensim cuspidatis, vel apice inflatis, pertusisque; sporulis non visis.

Hab. in foliis emorientibus Macarangae sp. (Euphorbiaceae), Los Baños, Ins. Philipp. (BAKER). — Mycelii colore et sporidiis biseptatis videtur species distincta.

3. Limacinia imperspicua Sacc., Notae Myc. XXIII, p. 62 (Acc. Ven. Trent. 4848 1917). — Epiphylla, maculas subrotundas 3-5 mm. diam. nigricantes sed fere imperspicuas formans; peritheciis subglobosis, leviter papillatis, nigris, 80-90  $\mu$  d., mycelio filiformi intricato adpresso, fuligineo insertis, contextu sinuoso atrofuligineo; ascis oblongis, sessilibus, apice rotundatis,  $40 \approx 14$ , aparaphysatis, 8-sporis; sporidiis distinctis, cylindraceis, curvulis (fere allantoideis), 4-septatis, utrinque obtusulis, non constrictis,  $14-16 \approx 3.5$ ; ceratopycnidiis interspersis e basi bulbosa cylindraceis sursum tenuatis sed summo apice obtusis,  $190-200 \approx 12$ , apice tantum 6  $\mu$  cr., aterrimis (hucusque sterilibus inventis).

Hab. in foliis languidis Celtidis sp. (Ulmaceae), Los Baños, Ins. Philipp.—Habitus vix capnodiaceus, sed ejus characteres adsunt.

## Sect. 4. Phaeophragmiæ

CAPNODIUM Mont. — Syll. I p. 73, IX p. 438, XI p. 270, XIV p. 476, XVII p. 555, XXII p. 59. — Syn. *Polychaeton* O. Ktze 1891 (sec. Theissen et Sydow, Ann. Mycol. 15., 1917, p. 473).

1. Capnodium juniperinum Baccarini, F. Eritr. II, n. 72 in Annali di 4649 Bot. 1917. — Mycelio fusco-nigro, ramoso articulato, articulis subglobosis, saepius 9-12 μ latis, conidia brunnea simplicia, didyma vel triseptata pleurogena gignentibus; spermogoniis subhaemisphaericis a 54 ad 90 μ latis; spermatiis hyalinis ellipticis 4-8 μ; pycnidiis lageniformibus atro-brunneis, ore hyalino fimbriato, levibus, tunc piriformibus atque sessilibus, 270 × 81, tunc pedunculatis 720 × 90; sporidiis vero conformibus, bi-tri-septatis, loculis interdum septo longitudinali percursis, 6,4-11,8 μ. Perithecia ascophora non visa.

Hab. in Junipero procera (Coniferae), ad Addinifas Sihid in Erythraea, Africa or.

Capnodium Tanakae Shirai et Hara,? 1917, Morb. Arbor. fruct. Jap. 4650
 p. 239 fig. 31; 3,3,4. — Mycelio late effuso, tomentoso, crasso, folia

fructusque obducente; peritheciis cylindraceis, simplicibus v. ramosis apice globoso-inflatis, membranaceis,  $70\cdot100~\mu$  diam., deorsum carbonaceis, atro-brunneis; ascis clavatis v. subfusoideis, 8-sporis,  $30\cdot45 \times 10\cdot12$ ; sporidiis biseriatis fusoideis v. ellipsoideis, 3-septatis, atro-brunneis,  $10\cdot15 \times 4\cdot5$ .

Hab. in foliis fructibusque Citri aurantiacae (Rutaceae), in Japonia.

- CAPNOPHAEUM Spegazzini, Notas Mycologicas, « Physis » t. IV, 1918, 4651 p. 287. Subiculum normale; perithecia subglobosa ostiolata, non v. vix umbonata, hispidula v. hirsuta; asci 8 spori; sporae phaeophragmiae. Typus, C. indicum (Brn.). Sacc., l. c., XXII, p. 64.
- METACAPNODIUM Spegazzini, Notas Mycologicas « Physis » t. IV. 4652 1918, p. 288. Subiculum normale; perithecia subglobosa ostiolata, non v. vix umbonata, glabra; asci 8-spori; sporae phaeophragmiae.—Typ., M. juniperi (Phl. et Plwr.). Sacc., Syll. Fung. IX p. 438.
- SETELLA Syd., Ann. Mycol. 14., 1916, p. 359 (Etym. seta), XV, 1917, p. 477. Perithecia superficialia, globulosa vel conoidea, astoma, submembranacea, atra, mycelio proprio parco vel subnullo, ad apicem setulâ longissimâ praedita, parenchymatice contexta. Asci 4-8-spori, aparaphysati. Sporidia ellipsoideo-oblonga, ex hyalino colorata, pluriseptata.
- 1. Setella disseminata Syd., l. c. Epiphylla; peritheciis per totam 4653 folii superficiem immutatam aequaliter densissimeque distributis, exiguis, conoideo-globulosis vel late breviterque conoideis, 45-70 μ diam., basi hyphulis brevibus torulosis viridulis vel olivaceis 4-5 μ crassis einetis, mycelio distincto proprio subnullo, superficialibus, astomis, submembranaceis, parenchymatice e cellulis obscure olivaceis ca. 10 μ diam., contextis, ad apicem setulam singulam (raro setulas duas) gerentibus; setula 250-350 μ longa, basi 7-9 μ lata, apicem versus sensim attenuata, summo apice 3-4 μ lata sed obtusa, obscure brunnea, superne saepe dilutiore, septata (articulis 30-50 μ longis), semper recta, erecta; ascis sessilibus, ovatis vel oblongis, aparaphysatis, 4-8-sporis, 40-65 × 20-30; sporidiis 2-vel saepius 3-stichis, ellipsoideo-oblongis, rectis vel saepe leniter inaequilateris, 3-septatis, non constrictis, primo hyalinis, in maturitate fuscidulis et subinde ad septum medium leniter constrictis, utrin-

que obtusis, 20-30 × 9-10, loculis extimis plerumque minoribus.

Hab. in foliis vivis v. languidis Schizostach yi acutiflori (Graminaceae), Los Baños ins. Philipp. (S. A. REYES), et Gigantoch loae Scribnerianae, Los Baños (C. F. BAKER).

PHRAGMOCAPNIAS Theiss. et Syd., Ann. Mycol. 15., 1917, p. 480.— Est Limacinia sporidiis brunneis donata.

1. Phragmocapnias Betle (Syd. et Butl.) Theiss et Syd., Ann. Myc. 4654 15., 1917, p. 480, Capnodium Betle Syd. et Butl., Ann. Mycol. IX, 1911, p. 384. — Amphigenum, late effusum, atrum, crustaceo-pelliculosum; mycelio fusco, dense intricato-ramoso, ex articulis cylindraceis leniter constrictis 3,5-6  $\mu$  cr. formato; conidiis Cladosporio similibus; pycnidiis erectis, usque ad 350  $\mu$  altis, cylindraceis, simplicibus parte media 15-25  $\mu$  cr., parte inferiore expansis, apice dilutioribus late ellipticis et 50  $\mu$  cr., poro pertusis; pycnidiosporis hyalinis, oblongis, continuis, dein plerumque 1-guttulatis septatisve, 4-10  $\approx$  2-4; peritheciis subhemisphaericis, atris, ostiolatis, 100-135  $\approx$  90-110; ascis clavatis, pedicellatis, plerumque 6-sporis; sporidiis fusoideis, 4-6-septatis, diu hyalinis, dein fuscis, 20-25  $\approx$  3-5.

Hab. in foliis Piperis Betle (Piperaceae), Dacca (A. L. Som), Muden, Amherst District Burma, Indiae orient. (E. J. Butler).

## Sect. 5. Hyalodictyae

PHAEOSACCARDINULA P. Henn. 1905, Syll. XVII p. 873, XXII p. 553.
Syn. sec. Theissen et Sydow (Ann. Mycol. 15., 1917, p. 480); Limacinula (Sacc. Syll. XVII p. 558, XXII p. 63); Phaeopeltis Clements, Genera of Fungi 1909 p. 52; Tephrosticta Syd., Ann. Mycol. 1904 p. 162 (ut Subgen.), Syll. XVII p. 745, Philipp. Journ. of Sc., C. Bot., VIII, 1913, p. 271; Capnites Theissen, Verh. zool.-bot. Ges. Wien, 1916, p. 353. — Typus gen. Phaeosaccardinula diospyricola P. Henn.

Phaeosaccardinula Malloti (Rehm) Theissen, in Theissen et Sydow, 4655
 c. p. 481, Limacinula Malloti Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 395. — Mycelio tabacino-fusco, totam superiorem foliorum paginam obducente, faciliter secedente, membranaceo, cellulis fuscidulis 10-14 × 6-7 arcte seriatis contexto, glabro; peritheciis plus minusve gregariis, membranaceis, globulosis, glabris, atris, poro minutissimo pertusis, 200 μ diam., siccis

apice collabentibus; ascis ovatis,  $50 \times 20-25$ , aparaphysatis, octosporis; sporidiis distichis, oblongis, utrinque obtusis, transverse 3-5-, longitudinaliter 1 septatis, hyalinis,  $20-24 \times 10-12$ .

Hab. in foliis Malloti philippinensis (Euphorbiaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — L. javanicae Zimm. proxima; differt tantum sporidiis minoribus.

2. Phaeosaccardinula Butleri (Sydow) Theiss. et Sydow, l. c. p. 451, 4656 Limacinula Butleri Sydow in Syd. et Butl., Ann. Mycol. IX, 1911. p. 385. - Mycelio atro, late effuso, crustaceo-membranaceo, paginam foliorum superiorem saepe omnino tegente, ex hyphis fuscis septatis, aliis repentibus 5-7 u cr. et setis atris simplicibus acutis usque ad 180 µ long. inferne 8-9 µ cr. praeditis, aliis majoribus longiusculis plus minus erectis simplicibus vel parce ramosis usque 13 μ cr. ad septa plus minusve constrictis composito; conidiis (e genere Triposporio) 3-4-radiatis, radiis singulis 4-6-locularibus superne attenuatis usque 70 µ long., basi usque 15 µ latis; pycnidiis erectis, dimorphis, aliis 150-250 µ alt. circa 18-24 µ cr., cylindraceis, aliis brevioribus sed latioribus ad basim usque 55 µ latis superne attenuatis; pycnidiosporis hyalinis, continuis, 3-3,5 × 1-1,5; peritheciis ovato-globosis, dein depressis, in sicco collabescentibus, poro minuto pertusis, 150-200 µ diam.; ascis ovatis, clavatis v. cylindraceo-clavatis, 60-85 \* 25-32, octosporis; sporidiis oblongis v. ellipticis, saepe leniter inaequilateris, hyalinis v. subhyalinis, utrinque rotundatis, transverse 3-6 septatis, longitudinaliter 2-3-septatis,  $24-32 \times 10-11$ .

Hab. in foliis Artocarpi mysorensis (Moraceae), Vayitri, Wynaad, Indiae or. (E. J. BUTLER).

3. Phaeosaccardinula Theae (Sydow) Theiss. et Butl., l. c. p. 481, Limacinula Theae Syd. et Butl., Ann. Mycol. IX, 1911, p. 386, fig. 6.—
Mycelio atro, effuso, crustaceo-membranaceo, paginam foliorum superiorem plerumque omnino tegente, ex hyphis fuscis septatis, aliis
repentibus ca. 5 μ cr. et setis atris simplicibus acutis usque ad
130 μ long. inferne 8 μ cr. praeditis, aliis majoribus erectis ramosis ad 10 μ cr.; conidiis (e genere Triposporio) stellatim 4-radiatis;
pycnidiis erectis dimorphis, aliis usque ad 300 μ altis cylindraceis
medio inflatis ibique usque ad 22 μ cr. superne attenuatis, aliis
late cylindraceis c. 80 μ altis et 30 μ latis; pycnidiosporis cylindraceis, rectis, hyalinis, continuis 2,5-3 × 1,5; peritheciis ascigeris
superficialibus, globosis, dein depressis, poro pertusis, 150-225 μ
diam.; ascis subsessilibus, ovoideis, octosporis; sporidiis oblongis,

utrinque rotundatis, hyalinis, murali divisis, transverse plerumque 5-septatis, septo uno longitudinali percursis, 25-33 > 9-11.

Hab. in foliis ramulisque Camelliae Theae (Theaceae), Rungmook, Darjeeling, Indiae or. (G. WATT). — Lim. javanicae (Zimm.) v. Höhn. proxima.

#### LIMACINULA Sacc. - Syll. XVII p. 558, XXII p. 63.

1. Limacinula caucasica Woronichin, Les fumagines du Département 4858 de Sotshi, in Bull. of Applied Bot. VIII, n. 6, p. 793, tab. 134, fig. 4., tab. 136 fig. 972-975. — Mycelio tenui inter hyphas Zukaliae caucasicae intricato, ex cellulis dilute-brunneis praecipue ovalibus, rarius cylindraceis, 7-10 × 3-4 constructo; hyphis ramosis, praecipue rectangulariter, saepe crustas parenchymaticas formantibus; peritheciis globosis parenchymaticis, membranaceis, leviter compressis, statu sicco fere patelliformibus, ostiolatis, 220-230 μ diam.; ascis oblongo-ovoideis, aparaphysatis, 45-75 × 18-30; sporis fusoideis, rectis vel curvatis, 30-45 × 5-7-(-9) apiculatis, septis 8-11 transversis vel obliquis, et longitudinale, 1-3 loculos dividente, instructis, pycnidiis elongatis, rectis, supra medium inflatis ibique 30-35 μ crassis, apicibus fimbriatis, 540-650 μ longis, 25-35 μ crassis.

Hab. in foliis vivis Taxi baccatae L. (Coniferae), soc. Zu-kaliae caucasicae Woronichin., Caucasus gub. Tshernomorskaja, pr. Chosta. (N. WORONICHIN).

2. Limacinula Salicis (Arn.) Sacc. et Trotter, Teichospora Salicis Arnaud, 4659 Ann. École Nat. Agric. Montpell. X, 1911, p. 325 et icon. p. 266.— Peritheciis ramicolis, minutis, 200 μ diam., globosis, sparsis, superficialibus depresse ostiolatis, nigro-nitidis, subiculo fumagineo insidentibus; ascis clavato-cylindraceis, aparaphysatis, 8-sporis; sporidiis ellipsoideo-fusoideis, fuscidulis, non constrictis, utrinque breviter mucronatis, transverse 5-septatis, 25-30 × 8-10, loculis pluribus longitrorsum 1-septatis.

Hab. ad ramos Salicis cinereae (Salicaceae), prope Montpellier, Galliae merid. — Ob subiculum ex icone vere fumagineo potius Limacinulae species.

3. Limacinula cupularis Patouillard, Bull. Soc. Mycol. de Fr., XXXIV, 4660 1918, p. 89. — Mycelio brunneo-nigro, crustam membranaceam tenuem separabilem totum folium obtegentem efformante; hyphis brunneis, cylindraceis, septatis ramosis 5-8  $\mu$  cr., hinc inde moniliformibus, ex articulis ellipsoideis  $15-20 \approx 8-10$  efformatis, levibus; pycnidiis non visis; peritheciis sessilibus superficialibus globosis

dein depresse capulatis, levibus, 250-300  $\mu$  diam., coriaceis, nigris, e cellulis angulosis brunneis circ. 6-12  $\mu$  cr. efformatis; ostiolo centrali rotundato, circa 50  $\mu$  cr., filis evanidis incoloribus radiantibus circumdato; ascis breviter stipitatis ovoideo-clavatis, aparaphysatis, inordinate 6-8 sporis, circ. 75  $\times$  33; sporidiis oblongis, utrinque rotundatis diu incoloribus et hyalinis, demum rubro-olivaceis, ad septa vix constrictis, 42-60  $\times$  16-20. 8-15 transverse septatis, septis verticalibus 3-4 praeditis.

Hab. in foliis arboris cujusdam ignoti, in Ins. Madagascar (VIGUIER). — Potius Phaeosaccardinula.

### Sect. 6. Phaeodictyae

COCCODINIUM Massal., Atti Ist. Ven. Sc., Lettere ed Arti, Ser. III, 4661
v. 5., Venezia 1860, p. 336. — Syn. Naetrocymbe Körb. 1865, Syll.
XXII p. 67. — Verisimiliter nomen körberianum anterius (Lich. sel. germ. 1858, n. 58) et tunc servandum.

### Sect. 7. Scolecosporae

**PSEUDOMELIOLA** Speg. — Syll. IX p. 938, XI p. 269, XVI p. 1127. XXII p. 57.

1. Pseudomeliola placida Syd., Leafl. Philipp. Bot., IV, 1911, art. 62, 4662 p. 1154. — Peritheciis hypophyllis, maculas minutas, 1-2 mm. diam., fuscas formantibus, mycelio parco ex hyphis fuscis irregulariter ramosis 6-10 μ crassis composito insidentibus, glomerulatis superficialibus, ovatis vel ovato-elongatis, 250-300 μ altis, 150-200 μ latis, subcarbonaceis, distincte papillatis, obscure brunneis; ascis cylindraceis, breviter pedicellatis, 70-130 μ longis, 7-10 μ latis, cotosporis; sporidiis filiformibus, pluries guttulatis, 60-100 μ longis, 1,5-2,5 μ crassis, hyalinis, saepe leniter curvulis; paraphysibus numerosis, hyalinis, filiformibus, ca. 1 μ crassis.

Hab. in foliis vivis Semecarpi Perrotteti (Anacardia-ceae), Todaya, Ms. Apo, Distr. Davos, ins. Mindanao, in Philipp. (ELMER).

OPHIOCAPNODIUM Spegazzini, Notas Mycologicas « Physis », t. IV, 4663 1918, p. 286.— Subiculum normale; perithecia subglobosa, ostiolo, cylindraceo praelongo praedita; asci 8-spori; sporae lineares pluriseptatae olivaceae. — Typus O. Usterii (Speg.) Speg.— Sacc., l. c., XXII, p. 57.

actinocymbe v. Höhn., Fragm. z. Mykol. n. 690 (1911). — Theissen 466 et Sydow, Ann. Mycol. 15., 1917, p. 478. — Mycelium dematiaceum membranaceum, setulosum. Perithecia insidentia, arescendo depressa, distincte ostiolata, polyasca. Sporidia elongato-cylindracea, subfiliformia, hyalina pluriseptata. — Typus sistit Actinocymbe separatosetosae (P. Henn.) v. Höhn. (Actiniopsis P. Henn., Syll. XXII p. 531).— Cl. v. Höhnel cum hoc gen. et compluribus affinibus (sed sporologice dissimilibus) gregem novum condidit:

NAETROCYMBEAE v. Höhn. 1909, Fragm. z. Mykol. VIII, n. 379 in Sitzb. k. Ak d. Wiss. Wien, math.-naturw. Kl., Bd. 118, Abt. I, p. 1200.

#### A. Setosae

1. Sporidia bilocularia

2. » quadrilocularia

3. Sporidia transverse multilocularia

4. > >

5. » muralia

B. Non setosae

6. Sporidia transverse multilocularia

7. » muralia

8. . »

CHARTOTHYRINA Theiss.

CHARTOTHYRIUM Speg.

ZUKALIA Sacc.

ACTINOCYMBE P. Henn.

TREUBIOMYCES V. H.

XYSTOZUKALIA Theiss.

PHAEOSACCARDINULA P. Henn.

NAETROCYMBE Körb.

Syn. CHAETOTHYRIKAE Theissen, Ann. Mycol. 11., 1913, p. 496.

I. Sporidia hyalina unilocularia

II. Sporidia hyalina quadrilocularia

III. Sporidia hyalina muralia

CHAETOTHYRINA Theiss.

CHARTOTHYRIUM Speg. (Syn. Malmeomyces Starb.)

TREUBIOMYCES v. Höhn.

# Subfam. 6. Parodiellineae Arnaud,

Ann. d. Epiphyties, t. VII, 1919-1920 (1921), p. 4.

#### I. Mycelium externum nullum

2. Stroma uniloculare: Trib. . .

a) Perithecia stromate late adnata;
 sporidia unilocularia

 b) Perithecia pedicello tenui stromate pulvinato connexa; sporidia bilocularia

. . . . Bagnisiopsideæ Arn.

Bagnisiopsis Th. et 2Syd.

Parodiellineæ Am.

PARODIELLINA (P. Henn.) Arn.

CHEVALIERIA Arnaud

- II. Mycelium externum praesens plerumque copiosum
  - Perithecia appendicibus destituta,
     mycelio colorato quandoque setuloso, mycelio interno evoluto
     (sp. phaeodidymae v. phaeophragmiae): Trib.

a) Phaeodidymae

- b) Phaeophragmiae
- c) Scolecosporae v. subscolecosporae

Parodiopsideæ Arn.

PARODIOPSIS Maubl. PERISPORINA P. Henn.

NEMATOTHECIUM Svd.

- BAGNISIOPSIS Th. et Syd., Ann. Mycol. XIII, 1915, p. 291 (in Dothideaceis). Stroma pulvinatum, erumpens, dothideoideum, loculis immersis (v. vertice subliberis). Asci paraphysati, octospori. Sporidia hyalina simplicia.
- 1. Bagnisiopsis rhoina (Syd. et Hara) Theiss. et Svdow, Ann. Mycol. 4665 XIII, 1915, p. 293, Bagnisiella rhoina Syd. et Hara, l. c. X, 1912, p. 408. Stromatibus erumpentibus, peridermii laciniis arcte cinctis, irregulariter distributis, globulosis vel ellipticis, 0,5·1 mm. longis, atris, superficie ob loculos prominulos rugosis; loculis 4·10 in quoque stromate, globulosis, 140·200 μ diam.; ascis clavatis, apice rotundatis ac crasse tunicatis, 85·105 × 17·19, octosporis, brevissime stipitatis, filiformiter paraphysatis; sporidiis oblongis, uno fine saepe latioribus, continuis, hyalinis, minute guttulatis, utrinque rotundatis, 20·24 × 6·10, rectis, distichis.

Hab. in ramis Rhois silvestris (Anacardiaceae), pr. Mino, Kawanye-mura, Japonia (K. HARA).

2. Bagnisiopsis Dioscoreae Wakefield, Bull. Misc. Inf. Kew, 1918, p. 4666 201 cum icon. — Stromatibus erumpentibus sublineari-elongatis, pulvinatis superficie ob loculos prominulos rugosis, atris, 1 mm. diametro, contextu pseudoparenchymatico. Loculis numerosis globosis ad 500 μ diametro. Ascis cylindraceis, apice rotundatis, brevissime stipitatis, octosporis, 120-135 × 12-15. Paraphysibus filiformibus, 2,5-3 μ diam. ascos aequantibus. Sporidiis monostichis, oblongis, utrinque obtusis, hyalinis, interdum polari-guttulatis, 17-18 × 7-8.5.

Hab. in caulibus petiolisque Dioscoreae prehensilis (Dioscoreaceae), Okigwi in Nigeria infer., Africa trop. (C. O. FARQUHARSON, TALBOT et OBAN).

3. Bagnisiopsis tijucensis Theiss. et Syd., l. c.— Hypophylla. Stromate 4667 nigro opaco rotundato usque 0,8 mm. diam., 0,4-0,45 mm. alto depresse pulvinato v. noduloso macula colore vinosa limitato et epi-

dermide rupta cincto; superficie muriculata; contextu rubro-brunneo subprosenchymatico; loculis immersis 250-350  $\mu$  diam., parietibus propriis nullis, superficialiter ore periphysibus circumdato apertis; ascis paraphysatis, p. sp. 85-100  $\times$  9-12; sporidiis monostichis, hyalinis (coacervatis leniter flavescentibus), 13-16  $\times$  6-8, el lipsoideis, continuis.

Hab. in foliis Tibouchinae v. Leandrae sp. (Melastomataceae), Serra do Itatiaia R. de Janeiro, Brasilia (Dusén).

CHEVALIERIA G. Arnaud, C. R. Ac. Sc. Paris t. 170, 1920, p. 203 4668 (Etym. e Chevalier qui fungus collegit). — Perithecia in stromate emergenti disposita; asci aparaphysati; sporidia bilocularia.

Huic pertinet Dimerosporium ctenotrichum Har. et Pat. et tunc Chevaliera ctenotricha (Har. et Pat.) Arnaud vocandum.

- PARODIOPSIS Maublanc in Arnaud., Not. Mycol. 1915, p. 22, Aste rinées I, 1918, p. 21, Ann. Serv. Epiphyt. I, 7., 1919-1920, p. 56.—
  A gen. Parodiella et Parodiellina mycelio externo praesenti diversum. Sporidia bilocularia. Sec. Arnaud, l. c. (1919-1920) p. 57, ad gen. Parodiopsis Maubl. spectant etiam: Chrysomyces Th. et Syd., Schistodes Th., Hypoplegma Th. et Syd., Perisporiopsis P. Henn., Piline Th.
- Parodiopsis melioloides (Wint.) Arnaud, Ann. Service Epiphyt. t. 7., 4669 (1919-1920), p. 58, tab. V.—Syn. Parodiella consimilis P. Henn. Cl. Arnaud (l.c.) in hac species diffusa formas novas sequentes distinguit.
  - a) typ. in Myrtaceis.
  - b) Monimiaceae, Brasilia in Monimiaceis.
  - c) Clusiaceae, Equatoria in Clusiaceas, status couid. tantum notum est Exosporina Clusiaceae Arn.
  - d) Luheae, Brasilia, in Tiliaceis (Luhea).
  - e) Meliaceae, America austr., in Meliaceis (Cabralea).
  - f) Anacardii, America austr., in Anacardiaceis (Anacardium, Tapiria etc.).
  - g) Erythroxyli, Brasilia, in Erythroxylaceis (Erythroxylon pulchrum).
  - h) Erythrinae, Brasilia, in Papilionaceis (Erythrina).
  - i) Cordiae, America austr., in Cordiaceis (Cordia).
- Parodiopsis Perae Arnaud, Ann. Service Epiphyt. t. 7. (1919-1920), 4670
   p. 57, 59 fig. 5-6, tab. IV. Mycelio valido, brunneo-rubescenti, se-

tulis mycelicis simplicibus praedito, haustoriis convolutis majusculis: peritheciis coriaceo-carnosis, infra stromaticis, parietibus crassiusculis donatis, obscure latericiis v. subcinnabarinis, 230 µ diam. ostiolo parum definito; ascis clavatis e disco sterili exurgentibus. aparaphysatis: sporidiis immaturis hyalinis, bilocularibus, 36 × 12, demum brunneis.

Hab. in Euphorbiaceis plurimis: Pera Leandrum, Brasilia et Peru, Alchornea Iricurana, America austr., Hevea sp., Brasilia, Manihot sp., Peru, et in Euphorbiaceis indet. ex Africa trop., America austr.; forma conidica in Sapio abvssinico (Exosporium lateritium Syd.), Amani, Africa or.

MEMATOTHECIUM Syd. in Leaslets of Philipp. Bot. V (1912) p. 1534.— (Etym. nema, filum vel hypha et theca pro perithecio, ob contextum peritheciorum hyphosum). - Perithecia in subiculo copiose evoluto superficialiter insidentia, globulosa, astoma, irregulariter dehiscentia, molliuscula, fusco-brunnea, contextu haud parenchymatico sed ex hyphis formato. Asci cylindracei, octospori, copiose paraphysati. Sporidia elongata, subfiliformia, pluriseptata, colorata.

1. Nematothecium vinosum Syd., loc. cit. -- Plagulas hypophyllas ro- 4671 tundatas vel irregulares vinosas 0,5 2 cm. latas efformans, in mycelio Meliolae parasitans; mycelio repente, hyphas Meliolae dense ambiente, ex hyphis densissime intertextis et connatis anastomosantibus, rete densum formantibus, primo subhyalinis dein fuscis, tenuibus, 1,5.2 \mu tantum crassis vel usque ad 3.4 \mu, saepe projectiones breves valde irregulares plerumque incisas vel acute lobatas gerentibus composito; peritheciis numerosis in quaque plagula, laxe dispositis vel subinde aggregatis, globosis vel globoso-depressis, 200-300 µ diam., molliusculis, brunneis vel vinoso-brunneis, astomis, irregulariter dehiscentibus, ambitu hyphis mycelii cinctis, contextu ex hyphis densissime intertextis et connatis composito; ascis fasciculatis, cylindraceis, apice rotundatis, haud incrassatis, rectis vel curvulis, subsessilibus, 65-90 \* 10-14, octosporis, paraphysibus copiosis, ascos aequantibus vel superantibus, superne varie curvis ramosisque hyalinis, 1,5-1,75 µ cr.; sporidiis parallele positis, subfiliformibus vel filiformi-fusoideis, plerumque sigmoideo-curvatis, utrinque attenuato-acutiusculis, primo multiguttulatis dein 6-10septatis, olivaceo-brunneis, 60-75 \* 3-4.

Hab. parasiticum in mycelio Meliolae ad folia Eugeniae incarnatae, Puerto Princesa, Palawan, ins. Philipp. — Fun-

gus valde curiosus, inter Perisporiaceas locandus, Aspergillaceis quoque affinis.

## Fam. 2. Microthyriaceae SACC.

Cum Microthyriaceis sensu ampliore, convenit novum Ordo Hemisphaeriales Theissen (Ann. Myc. 1913 p. 468; Mycol. Centralbl. III, 1913, p. 273-286, 4 icon. 1 tab.), cuius caracteres et dispositio synoptica sec. Theissen et Sydow (Ann. Mycol. 15., 1917, p. 396) haec est \*):

Perithecia v. ascomata dimidiato-scutata, libera v. basi hypostromate iu epidermide radicata

- A. Scutellum radiatim constructum
  - a) Mycelium filiforme v. nullum
    - I. Perithecia adnata
      - 1. Perithecia subcuticularia
    - 2. Perithecia superficialia, hypostromate adnata
    - II. Perithecia et mycelium superficialia libera
  - b) Mycelium radiante membranaceum
- B. Scutellum non radiatim constructum

Stigmateaceae

Polystomellaceae Microthyriaceae

Trichopeltaceae

Hemisphaeriaceae

## Subfam. 1. Stigmateae

Conspectus Generum Stigmatacearum secundum Theissen, et Theissen et Sydow:

#### Fam. 1. Stigmateaceæ

Ann. Mycol. 14., 1916, p. 426; Theiss. et Sydow, Ann. Myc. 15., 1917, p. 399.

- A. Ascomata disco ascigero basi praedita Eustigmateae Th. et Syd.
  - I. Scutellum distincte radiatum
    - a) Mycelium praesens liberum; sporidia muralia
  - b) Mycelium nullum
    - 1. Sporidia brunnea continua
    - 2. Sporidia hyalina didyma; ascomata elongata
    - 3. Sporidia brunnea didyma
    - 4. Sporidia hyalophragmia
  - II. Scutellum fere totum pseudoparenchymaticum; mycelium nullum; sporidia brunnea didyma

VIZELLA Sacc.

ENTOPELTIS v. H.

LEPTOPELTIS v. H.

STIGMATEA Fr.

= Hormotheca Bon.

STIGMATODOTHIS' Syd.

<sup>\*)</sup> Cnfr. etiam: ARNAUD in C. R. Ac. Sc. Paris, t. 159, 1914, p. 807, t. 164., 1917, p. 574 et p. 888.

394

a) Ascomata setulosa; paraphyses praesentes

b) Ascomata nuda; paraphyses nullae

Coleroa Rabh. Aphysa Th. et Syd.

B. Ascomata discis ascigeris plurimis praedita; scutellum contextu distincte radiante praeditum; mycelium nullum

MUNKIELLEAE Th. et Syd.

COSCINOPELTIS Speg.

1. Sporidia hyalina unilocularia

2. Sporidia hyalina bilocularia

a) loculi aequales

β) loculo inferiore papilliformi

3. Sporidia phaeophragmia

ISOMUNKIA Th. et Syd. MUNKIELLA Speg: MELANOCHLAMYS Speg.

#### Genera dubia:

 Disci ascigeri annulati innati; sporidia brunnea unilocularia; paraphyses praesentes

BLASDALEA Sacc. et Syd.

 Disci ascigeri lineares irregulariter distributi; paraphyses praesentes

 a) Fructificatio demum libera; sporidia bilocularia brunuea

 b) Fructificatio diu cuticula tecta; sporidia bilocularia brunnea AULACOSTROMA Syd.

PSEUDOLEMBOSIA Theiss.

# Sect. 1. Hyalosporae

COSCINOPELTIS Speg. — Syll. XXII p. 515. — Theiss. et Syd., Aun. 4672 Mycol. XIII, 1915, p. 260; XV, 1917, p. 402. — Huc spectat etiam sec. Theiss. et Syd.: Phyllachora tenuis Speg. et Ph. tenuissima Sacc. et Syd., Syll. IX p. 1009, XIV p. 673.

#### Sect. 2. Phaeosporae

et Syd., Ann. Mycol. XV, 1917, p. 401. — Ascomata subcuticularia, scutata, alata, contextu hyphenchymatico radiante tenui praedita, hyphis e margine prominentibus. Sporidia unilocularia brunnea; caeterum ut in Vizella. — Typ. gen. Ent. interrupta (Wint.) v. Höhn., l. c.

# Sect. 3. Hyalodidymae

LEPTOPELTIS v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, p. 358.— 4674
Subcuticularis. — Typus gen. Lept. filicina (Mont., ut Gloniella) v.
Höhn. — In Pteride.

MUNKIELLA Speg. — Syll. IX p. 1034, XVI p. 625, XXII p. 434.— Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 262; XV, 1917, p. 402.

1. Munkiella Shiraiana Miyake et Hara, Stud. üb. die Pilze der Bambusse (jap.) in litt. VI, 1912. Status conidiophorus: Melanconium Shiraianum Syd. — Syll. XIV p. 1009. — Perithecis uniseriatis (st. conidioph. intermixtis), stromate immersis et cum eo continuis, globosis v. leniter depressis, 140-190 μ diam., ostiolis erumpentibus; ascis cylindricis, apice rotundatis deorsum leviter tenuatis, 85-95 × 18-24, octosporis; sporidiis distichis, raro monostichis, ellipsoideis v. ovoideis, saepe curvulis, bilocularibus, loculis valde inaequalibus, non constrictis, 25-35 × 8,5-12, hyalinis, prima aetate strato mucoso obductis; paraphysibus filiformibus, 5 μ cr., asco paullo longioribus.

Hab. in culmis emortuis Phyllostachydis bambusoidis, Komaba Tokyo, Japonia. — Germinatio in stat. conid. et ascoph. observata.

ISOMUNKIA Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 261; XV, 1917, 4876
p. 402. — A gen. Coscinopeltis differt sporidiis hyalodidymis. — Typ. gen. Is. pulvinula (Pat., ut Dothidella) Th. et Syd., l. c.

# Sect. 4. Phaeodidymae

STIGMATEA Fr. — Syll. I p. 541, IX p. 660, XIV p. 534, XVI p. 478, XVII p. 649, XXII p. 148.

1. Stigmatea Pelvetiae Sutherland, New Phytologist, XIV (1915), 4677 nn. 2-3, p. 37 fig. II, 1-6. — Peritheciis subconcentrice in maculis nigricantibus dispositis, immersis, prominentiis hemisphaericis efformantibus ostiolo tantum punctiformi erumpentibus, 160-200 μ cr; contextu apicem versus tantum evoluto; ascis cylindraceis, longis, apice incrassatis, 100-120 × 12-14, 8-sporis; paraphysibus praesentibus, simplicibus v. ramosis, septatis; sporis ovoideis, 22-25 × 9-12, hyalinis, uniseptatis, distincte constrictis; pycnidiis minoribus, pyriformibus, tunica crassa nigra praeditis, 70 × 85 μ cr., primum immersis dein saperficialibus; sporulis 3 × 1,5 (? Phyllospicta).

Hah. parasitice in thallo Pelvetiae (ex Algis), ad litora Scotiae.

Stigmatea bullata Syd., Leafl. Philipp. Bot., IV, 1911, Art. 62, p. 4678
 1154. — Maculis orbicularibus in hypophyllo ochraceis obscurius marginatis, 2.4 mm. diam., leniter bullatis; peritheciis epiphyllis,

totam maculam occupantibus, densissime aggregatis, globosis, atris, 70-100  $\mu$  diam., pariete 18-20  $\mu$  crasso, apice tantum prominulis, pertusis; ascis clavatis, apice rotundatis, breviter pedicellatis, 45-70  $\mu$  longis, 14-18  $\mu$  latis, octosporis; sporidiis distichis utrinque obtusis, medio 1-septatis, non constrictis, hyalinis, 18-22  $\mu$  longis, 5-7  $\mu$  latis; paraphysibus ascos aequantibus filiformibus 1  $\mu$  cr.

Hab. in foliis vivis Schefflerae mindanaensis (Araliaceae), Todaya, Ms. Apo, Distr. Davao, ins. Mindanao in Philipp. (ELMER).

3. Stigmatea Cephalariae Ranojevic, Ann. Mycol. XII, 1914, p. 396. — 4679 Maculis primum brunneo-violaceis, dein albido-griseis plerumque violaceo-marginatis, rotundatis, usque 2 mm. latis, saepe confluentibus; peritheciis epiphyllis, gregariis, nigris, subepidermicis, ostiolo minuto perforantibus, globosis, elongatis, contextu cellulis brunneis usque ad 142 μ latis efformato; ascis cylindraceis, supra rotundatis, reetis, curvatis, 50-62 × 9-13; sporidiis infra subdistichis supra monostichis, elongato-clavatis, bilocularibus, loculo inferiori minori, septo saepe constrictis, 11-15 × 4-7,5, pallide brunneo-fuligineis, paraphysibus filiformibus, septatis, supra 1-2 dichotome ramosis, apice incrassatis, ascis aequilongis v. parum superautibus.

Hab. in foliis caulibusque vivis Cephalariae transylvanicae (Dipsacaceae), Weinbergen Gorica prope Nisc, Serbia.

4. Stigmatea philippinensis H. S. Yates, Philipp. Journ. Sc. XII (1917) 4680 p. 376. — Maculis albo-griseis, orbicularibus vel elongatis, 5 mm. diam. vel usque ad 3 cm. longis et 1 cm. latis; peritheciis immersis, ostiolis numerosis, epiphyllis, hemisphaericis, 75-100 μ diam.; ostiolis orbicularibus; ascis elongatis, 26-30 × 10, octosporis; sporidiis oblongo-ellipsoideis, medio 1-septatis, levibus, 12-13 × 3-4.

Hab. in foliis Homalii (Flacourtiaceae), Basiad, Tayabos, Luzon, Ins. Philipp.

5. Stigmatea cinereo-maculans Rehm, Ascomyc. Philipp. II, in Phi-4681 lipp. Journ. of Sci. VIII (1913) p. 257. — Peritheciis maculis epiphyllis dilute cinereis, rarissime atro-marginatis, orbicularibus, 0,5-1 mm. latis, mox in latas plagas confluentibus innatis, primitus singulis, lenticularibus, hemiglobose prominentibus, atris, poro pertusis, glabris, 200 μ latis, membranaceis, parenchymatice fuscidule contextis; ascis cylindraceis, 25 × 3-3,5, plerumque tetrasporis paraphysibus haud conspicuis; sporidiis monostichis, ellipsoideis, utrinque rotundatis, medio septatis, non constrictis, utraque parte 2-guttulata, hyalinis, 6-7 × 2.

Hab. in vaginis foliorum Pandani (Pandanaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). - St. Pandani Pat. sporidiis et ascis omnino diversa.

6. Stigmatea Pirolae (Fr.) Schröt., Die Pilze Schles., II p. 332 (1908) 4682 Lind. Dan. Fung. p. 201 t. IV p. 49-50. - Ita vocanda Sphaeria (Depazea) Pirolae Fr. - Sacc. Syll. III p. 64, seu Sphaerella chimophilina Peck. - Syll. XI p. 297. - Perithecia 120-150 u diam.; asci clavati apice rotundati, subsessiles, fasciculati, aparaphysati, 40-56 \* 8; sporidia octona, inaequaliter 1-septata, hyalina, 12-14 \* 4.

Hab. in foliis Pirolae (Pirolaceae), in Germania, Dania, Amer. bor. - Ob sporidia hyalodidyma potius Isomunkia.

7. Stigmatea moravica Petrak, Flor. Boh. et Mor. exs. II Ser. 1. Pilze 4683 n. 172 (sub Stigmatea seriata Wint.); Ann. Mycol. XII, 1914, p. 473.-Peritheciis gregariis, minutissimis, epidermide tectis, ambitu circularibus v. ovatis, 70 100 µ diam., poro minutissimo pertusis, contextu membranaceo pseudoparenchymatico, brunneo: ascis fusoideis, utrinque paullatim angustatis medio latissimis sessilibus, 50-60 × 4-7, aparaphysatis; sporidiis distichis v. submonostichis, rectis v. plus minusve curvulis, anguste fusoideis utrinque attenuatis, medio uniseptatis, ad septum non constrictis, eguttulatis, 10-18 ¥ 1,5-2,5.

Hab. in ramulis emortuis Rosae caninae (Rosaceae), prope Hraburka, Mähr. Weisskirchen, Moraviae or.

8. Stigmatea Tonduzi Spegaz., Fungi Costaric. nonn., in Bol. Ac. Nac. 4684 Cienc. Cordoba, t. 23., 1919, Extr. p. 194. — Maculae epiphyllae suborbiculares, subdeterminatae, rufescentes; perithecia epiphylla centro macularum laxe gregaria, innato-erumpentia, pusilla, 75-100 µ diam., fusca sublenticularia umbonatulo-ostiolata, glabra; asci subclavulati, antice obtusissime rotundati, postice sensim attenuati, pedicello brevi crassiusculo fulti, aparaphysati, octospori, 45-55 \* 8-10; sporae angustae subcylindraceae, utrinque obtusae medio 1septato-constrictulae, laeves, hyalinae, 14.15 × 3,5-4.

Hab. in foliis vivis Rubi (urticifolii) (Rosaceae), prope Carthago Costarica, America trop.

9. Stigmatea Guettardae L. R. Tehon, Bot. Gazette 67., 1919, p. 508. 4685 Maculis latis 0,5-3 cm. diam., irregularibus, pallide brunneis v. juventute rubris vetustate cinereis v. albis, quandoque definitis et brunneo marginatis; peritheciis epiphyllis, gregariis, centro macularum dispositis, parvis, nigris, 60-80 \u03bc diam., ostiolo erumpenti 6-10 µ lato praeditis; ascis oblique oblongis, brevibus et abrupte

stipitatis, supra obtusis, octosporis,  $25-40 \times 8-10$ ; sporidiis elongato-ellipsoideis, bilocularibus, constrictulis, loculis subaequalibus, hyalinis,  $11-13 \times 2-3$ ; paraphysibus longis filiformibus septatis, e hyalinis flavescentibus.

Hab. in foliis Guettardae ovalifoliae (Rubiaceae), Maricao, Barros, M. Alegrillo, Indiera Fria, G. scabrae, Tanama Riv., Porto Rico, America.

10. Stigmatea Cestri Patouill., Bull. Soc. Mycol. de Fr., 1912, p. 141.— 4686 Maculis epiphyllis, orbicularibus, nigris, 4-8 mm. diam., irregulariter sparsis; peritheciis centro gregariis, globosis, nitentibus, semiimmersis, coriaceis, 90-100  $\mu$  latis, apice poro pertusis, albo-nucleatis; ascis claviformibus, obtusis, circ.  $100 \times 20$ , octosporis, aparaphysatis; sporidiis biseriatis, hyalinis, continuis, ellipsoideis, intus granulosis.  $21 \times 9$ .

Hab. in foliis vivis Cestri sp. (Solanaceae), prope San José Costa Rica, America Centr. (Tonduz).

#### COLEROA Fr. ut sub-gen. — Syll. XXII p. 153.

1. Coleroa Aliculariae Gonz. Frag., Hongos sobre Muscineas, Bol. Soc. 4687 Espan. Hist. Nat. t. XVI, 1916, p. 368. — Peritheciis epiphyllis, plerumque 1-2 superficialibus, globulosis, usque 125 μ diam., contextu pseudoparenchymatico, membranaceo, fuligineo, setulis laxe vestitis, setis fuscis usque 38 × 3, continuis v. 1-septatis, attenuatis, rectis v. leniter flexuosis, raro curvulis; ascis obpiriformibus usque 45 × 14, aparaphysatis, subsessilibus, parietibus crassiusculis, apice rotundatis; sporidiis irregulariter distichis, ovoideo-oblongis, subhyalinis, 12-15 × 6-7, ad medium uniseptatis, non constrictis, loculis 1-2 crasse guttulatis.

Hab. in foliis vivis Aliculariae scalaris (Bryophytae), in montibus Guadarramae loco dicto « La Cebollera », Hispania (Beltran). — Coleroae bryophilae (Fuck.) proxima.

2. Coleroa Bubaki Gonz. Frag., Hongos sobre Muscineas, Bol. Soc. 4688 Espan. de Hist. nat. t. XVI, 1916, p. 367. — Peritheciis 1-5-epiphyllis, superficialibus, globuloso-depressis, 75-175 μ diam., contextu pseudoparenchymatico, membranaceo, fusco, poro minuto pertusis, setulis numerosis vestitis, setis flexuosis, obtusiusculis, septatis, plerunque 25-30 μ long. basi 3-3,5 μ cr.; ascis ellipsoideo-oblongis 36-40 × 14-15,5, octosporis, brevissime pedicellatis, apice rotundato-incrassatis, aparaphysatis; sporidiis tristichis v. conglobatis, ovoideo-oblongis, subhyalinis, primum continuis, dein 1-septatis, non

constrictis, loculo uno latiore altero attenuato, 1-guttulatis v. granulosis, extremis utrinque rotundatis, 12-15 \* 5-5,5.

Hab. in foliis vivis v. languidis Marsupellae emarginatae (Bryophytae), prope Santiago, Hispania (A. CASARES). — Affinis Coleroae bryophilae (Fuck.), sed diversa.

3. Coleroa Casaresi Bub. et Frag. in Bub., Hedw. LVII p. 3 (1915). — 4689 Peritheciis epiphyllis, 1-3, superficialibus, membranaceis, globosis, basi applanatis, 75-100 μ diam., nigris, apice poro rotundo apertis, contextu parenchymatico atro-brunneo, extus setis paucis sparsis, nunc creberrimis, atro-brunneis 20-40 × 3, rectis v. curvatis, sursum parum attenuatis, continuis, v. 1-septatis; ascis ovoideo-oblongis, 20-28 × 7-9, apice rotundatis et incrassatis, breve pedicellatis, 8-sporis, aparaphysatis; sporidiis 3-4-stichis, oblongis, 7-9 × 3-3,5 utrinque rotundato-attenuatis, 1-septatis, loculo sup. interdum latiore.

Hab. in foliis S c a p a n i a e n e m o r o s a e (Bryophytae), Castro-Loureiro, Pontevedra, Hispania (Casares). — A Col. turfosorum (Mont.) Bubák sphagnicola, distinguenda. — Var. Frullaniae Gonz. Fragoso, Mem. R. Soc. Espan. Hist. Nat. t. 11., 1919, 3., p. 108, fig. 1. — Peritheciis subsuperficialibus basi immersis, atris, globosis, usque 120  $\mu$  diam., contextu pseudoparenchymatico, membranaceo, poro regulariter pertusis, setis rectis vel curvulis, continuis, vel 1-septatis, usque 28  $\mu$  long., circumdatis; ascis usque  $28 \times 9$ , ovoideo-oblongis, subsessilibus; sporidiis irregulariter distichis vel tristichis, prope medium 1-septatis, utrinque attenuato-rotundatis, loculis guttulis crassis minutisque praeditis.

Hab. in foliis vivis F r u l l a n i a e T a m a r i s c i (Bryophytae) cui noxia, i Pontevedra, Hispania (Dr. A. CASARES). — Var. Plagiochilae Gonz. Frag., l. c. — Peritheciis, 1-5, epi-vel hypophyllis, superficialibus, globosis vel globoso-applanatis, 60-95 diam., contextu pseudoparenchymatico, membranaceo, atro-brunneo, poro rotundo apertis, setis prope apicem dispersis vel circumdantibus, atro-brunneis, rectis vel vix curvatis, attenuatis, usque 45 × 3,5-4, continuis, rarissimis 1-septatis; ascis ovoideo-oblongis, 20-25 × 7-10, rarius usque 28 × 10, brevi pedicellatis, octosporis, aparaphysatis; sporidiis distichis vel conglobatis, ellipsoideo-oblongis, 10-11,5 × 3,2-3,5, utrinque rotundatis, 1-septatis, rarius loculis 1-guttulatis.

Hab. in foliis Plagiochilae asplenioidis (Bryophytae), in silvis Saleur, Germania (C. KECK).

4. Coleroa inconspicua Bubàk, III Beitr. Pilz. Montenegro, in Bota. 4690 nikai Közlemények, 1915, p. (54). - Peritheciis in rimis fissurisque caulium et ramorum, superficialibus, facile secedentibus, basi hyphis simplicibus vel funiculato-contextis brunneis vel hyalinis, torulosis, repentibus instructis, globosis, basi applanatis, supra subconicis, ostiolatis, 40-80 µ in diam., castaneo-brunneis, contextu pseudopa. renchymatico, tenui, melleo, setis rigidis, rectis, usque 50 µ longis, 4 μ latis, sursum sensim attenuatis, apice acutatis vel rotundatis, brunneis, continuis vel 1-2 septatis, paucis vel pluribus supra or natis; ascis oblongis vel oblongo-cylindricis, 38-60 × 9-13, apice rotundatis, basi breve pedicellatis, paraphysibus ephemeris, tenuibus obvallatis, octosporis; sporidiis oblique distichis, oblongo-clavatis, 15-19 \$ 5, rectis vel curvatis, utrinque rotundatis, medio uniseptatis, non constrictis, loculo superiore latiore, olivaceo-chlorinis.

Hab. in caulibus ramisque Genistae sericeae (Leguminosae), ad Njegusi, Montenegro.

APHYSA Theiss, et Sydow, Ann. Mycol. 15., 1917, p. 134, et p. 402.— 4691 A Stigmatea differt scutellis levibus margine tantum radiantibus; paraphysibus nullis. - Typ. gen. Aph. Rhynchosiae (K. et Cke. in Stigmatea) Th. et Syd. (= Parodiella Schimperi P. Henn).

# Sect. 5. Hyalophragmiae

- STIGMATODOTHIS Syd., Philipp. Journ. Sc., C. Bot., IX, n. 2 (1914), p. 173. - Stromata subcuticularia, exigua, 1-loculigera, carbonacea, superne pluristratose et irregulariter radiatim contexta, haud ostiolata sed superne tandem poro rotundo aperta, strato basali tenuissimo, hypostromate parco per epidermidem profunde in contextu matricis penetrante massam compactam haud formante. Asci ovatooblongi, 8-spori. Paraphyses haud typicae, cellulosae submucosae. Sporidia hyalina transverse pluriseptata.
- 1. Stigmatodothis palawanensis Syd., l. c., fig. 5. Stromatibus am- 4692 phigenis sparse vel laxe gregariis haud maculicolis rotundatis, depresse hemisphaericis, 130-170 µ diam., atris, pro ratione facile secedentibus, sed inter cuticulam et epidermidem ortis, tota basi in pariete exteriore epidermidis sessilibus, primitus cuticula dein rupta et plus minus evanescente obtectis, carbonaceis, superne pluristratose irregulariterque radiatim contextis, haud ostiolatis sed tandem poro rotundo apertis, hypostromate inter epidermidis cellulas in

contextu matricis profunde penetrante, strato basali tenuissimo plano brunneolo; ascis ovato-oblongis, sessilibus, tenuiter tunicatis, apice rotundatis, 26-30 \* 14-16, octosporis; paraphysibus hand typicis cellulosis, submucosis, sporidiis tristichis, clavulatis, superne rotundatis, deorsum angustioribus, transverse 3-septatis, non constrictis, rectis vel lenissime inaequilateris, hyalinis, 14-17 × 3,5-4.

Hab. in foliis vivis Dendrobii, Palawan, Taytay, Ins. Philipp. (MERRILL).

### Sect. 6. Phaeophragmiae

MELANOCHLAMYS Syd. ap. Fuhrmann et Mayor, Voy. Expl. Scient. Colombie, in Mém. Soc. neuchât. Sc. Nat. V p. 438 (1913), Ann. Mycol. XIII, 1915, p. 264. — Stroma membranaceum, dimidiato-scu. tatum, microthyriaceum, atrum, per cuticulam erumpens et subsuperficiale, ex hyphis radiantibus contextum, ambitu fimbriatum. Perithecia hypostromatica, globuloso-lenticularia, ostiolata, contextu minute fibroso. Asci clavati, octospori, paraphysati. Sporidia transverse pluriseptata, colorata. - Affine videtur Gilletiellae Sacc. et Syd. (Heterochlamys Pat.) a quo praecipue differt sporidiis co loratis

1. Melanochiamys leucoptera Syd., loc. cit., cum ic. - Stromatibus by- 4693 pophyllis, sparsis, irregularibus, rotundatis vel oblongis, 0,5-2 mm. longis vel latis, sub cuticula ortis, mox erumpentibus et partim euticulae laciniis tectis, subsuperficialibus, atris, opacis, membranaceis, ex hyphis radiantibus longis, 2-2,5 µ latis, flexuosis vel maeandrice curvatis, septatis, fuscis contextis, ad ambitum multo tenuioribus albo-membranaceis et fimbriatis; peritheciis 2-10 in quoque stromate, hypostromaticis, convexis, globuloso-lenticularibus, 80-130 µ diam., contextu dilute brunneo minute fibroso; ascis clavatis, brevissime stipitatis, apice obtusis, 38-46 × 9-10, octosporis; filiformiter paraphysatis; sporidiis distichis, oblongis, utrinque obtusis, 3-septatis, ad septa leniter constrictis, cellula secunda superiore paullo latiore, ex hyalino mox obscure olivaceo-brunneis, 13-16 \* 3,5-4,5.

Hab. in foliis languidis Bambusaceae cuiusdam, in dep. Magdalena prope El Banco, Columbia.

# Sect. 7. Hyalodictyae

- \*) VIZELLA (Sacc.) Emend. Theissen in Broteria XII, 1914, p. 13.— Syll. II p. 662, IX p. 1054, XVII p. 861, XXII p. 515. — Cnfr. etiam Theiss. e Syd., Ann. Mycol. XV, 1917, p. 401.
- 1. Vizella Passifierae Rehm, Ascom. Philipp. IV, Leaflets of Philipp. 4694 Botany, VI (1913) p. 1945. Peritheciis sessilibus, confertis, interdum fere confluentibus, dimidiato-orbicularibus, convexis, poro perspicuo pertusis, nigris, 150-200  $\mu$  latis, glabris, contextu membranaceo fusco, ad marginem hyphis brevibus radiantibus obsessis; ascis evanidis; sporidiis oblongis, continuis, utrinque rotundatis, fuscis,  $20\text{-}25 \approx 10$ .

Hab. in caulibus emortuis Passiflorae quadrangularis, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

Vizella Guilielmi Rehm in Rick, Ann. Mycol. IX, 1911, p. 181. — 4695
 Nomen nudum. — Hab. in Sorocea ilicifolia, America austr. — (Etiam sub Linhartia Soroceae Rehm, in l. c.).

#### STIGMATEACEARUM gen. dubia:

- AULACOSTROMA Syd., Philipp. Journ. of Sc. Sect. C. Bot. v. IX, 1914, p. 176. Theissen et Sydow, Ann. Mycolog. XIII, 1915, p. 256; XV, 1917, p. 403. Stromata subcuticularia, radiato-contexta, demum cuticulâ ruptâ libera superficialia, hypostromate extenso obscuro in parte exteriore epidermidis, peripherice in hyphas radiantes ramosas dissoluta. Loculi lineares, inordinate in stromate discurrentes. Asci paraphysati octospori. Sporae phaeodidymae.
- 1. Aulacostroma palawanense Syd., l. c. fig. 7; Theiss. et Syd. l. c. 1915, 4696 tab. VI fig. 11-13. Stromata epiphylla, plagulas primitus minutas orbiculares, mox confluentes majores et irregulares formantia, subinde folia fere tota obtegentia, plana, crustacea, atra, granulosa, peripherice in hyphas radiantes dissoluta; hyphis longiusculis, alternatim ramosis, fuscis, rectis vel irregulariter flexuosis, remote septatis, 4-5,5 μ crassis, in axillis bulbillulas irregulares vel oblongas concolores vel parum obscuriores gerentibus; peritheciis plus minus numerosis in quoque stromate, laxe vel densiuscule dispositis, a reliquiis epidermidis ruptae obtectis, linea-

<sup>\*)</sup> Sec. THEISS, et Synow huic gen, spectant sporidia muralia hyalina nec continua obseura.

ribus, atris, 0.3-1.2 mm. longis,  $150-200~\mu$  latis, rectis vel varie curvatis,  $80-90~\mu$  altis, aut geniculatis, rima longitudinali apertis, contextu atro-fusco, marginem versus fusco, ex hyphis rectis vel subrectis remote septatis (articulis  $15-25~\mu$  longis  $2.5-3.5~\mu$  crassis) ad apicem dichotomo partitis composito, nucleo hyalino-viridulo mucoso; ascis subglobosis, ovatis vel ovato-oblongis, sessilibus, apice rotundatis, 48-55~25-35, octosporis; paraphysibus superne subclavatis, hyalino-viridulis  $1.5-2~\mu$  crassis, mucosis; sporidiis distichis vel tristichis aut conglobatis, ellipsoideis vel oblongo-ellipsoideis, utrinque late rotundatis, medio 1-septatis, constrictis, ex hyalino fuscis, levibus, 20-25~10-12; pycnidiosporis in peritheciis similibus evolutis, sessilibus, cylindraceis, utrinque obtusis, continuis, hyalinis, 8-12~2-2.5.

Hab. in foliis Pandani Merrilli (Pandanaceae), Palawan, Taytay, Ins. Philippin. (MERRILL).

et Syd., Ann. Mycol. XII, 1915, p. 257; XV, 1917, p. 403. — Stromata subcuticularia, tecta, crustacea, absque hyphis liberis, radiatocontexta, loculis discretis linearibus. Asci paraphysati octospori. Sporae phaeodidymae. — Pycnidia lenticularia, subcuticularia, irregulariter rupta, conidiis brunneis cruciatim septatis. — Typ. gen. Ps. geographica (Mass. ut Lembosia) Th., Ps. lenticularis (Wint. ut Lembosia) Th.

# Subfum. 2. Hemihysterieae Speg. (Polystomelleae Th. et Syd.)

Conspectus Gen. Polystomeliacearum sec. Theissen et Sydow

#### Fam. 2. Polystomellaces: Theiss. et Syd.

Ann. Myc. 18, 1915, p. 158; Theiss. et Syd., Ann. Mycol. 13., 1915, p. 195; 15., 1917, p. 404.

A. Ascomata superficialiter disposita, hypostromate intramatricali; disci ascigeri lineares

PARMULINEAE Theiss. et Syd.

- I. Disci ascigeri radiatim dispositi
- a) Ascomata centro inserta; paraphyses praesentes
  - Ascomata glabra, disci ascigeri stellatim dispositi; sporidia phaeodidyma

PARMULINA Th. et Syd.

- 2. Ascomata glabra, disci ascigeri flabellati: sporidia phaeodidyma
- 3. Ascomata setulosa; disci ascigeri irregulariter stellati; sporidia phaeodidyma
- b) Ascomata varie inserta
  - Ascomata pili conidiferi destituta; sporidia phaeodidyma; paraphyses praesentes
  - Ascomata pili conidiferi praedita; sporidia hyalodidyma; paraphyses nullae
- II. Disci ascigeri annulatim dispositi
  - a) Ascomata centro inserta
    - Sporidia continua brunnea; asci 16-spori
    - 2. Sporidia hyalodidyma; asci 8spori; paraphyses praesentes
    - 3. Sporidia phaeodidyma
    - a) Disci ascigeri margine non radiantes; sporidia loculis subaequalibus praedita; paraphyses praesentes
    - β) Disci ascigeri margine non radiantes; sporidia loculis inacqualibus praedita; paraphyses nullae
    - γ) Disci ascigeri margine radianes; paraphyses nullae
  - b) Ascomata varie inserta
    - 1. Sporidia hyalodidyma; paraphyses nullae
    - 2. Sporidia phaeodidyma; paraphyses praesentes
    - 3. Sporidia hyalodictya; paraphyses praesentes
- III. Disci ascigeri irregulariter dispositi
  - a) Ascomata centro inserta; sporidia phaeodidyma
    - 1. Paraphyses praesentes
    - 2. Paraphyses absentes

RHIPIDOCARPUM Th. et Svd.

CHAETASPIS Svd.

SCHNEEPIA Speg.

== Parmularia Lév. quia immaturum

PARMULARIELLA P. Henn

CYCLOSTOMELLA Pat.

CYCLOSCHIZON P. Henn.

DIELSIELLA P. Henn.

— Maurodothis Sacc. et Syd.

Polycyclus v. H.

INOCYCLUS Th. et Syd.

POLYCYCLINA Th. et Syd.

COCCONIA Sacc.

MENDOGIA Rac.

— Uleopeltis P. Henn.

MONORHIZA Th. et Syd. MONORHIZINA Th. et Syd.

- b) Ascomata varie inserta; sporae didymae
  - 1. Hypostroma fasciculatum nullum
    - a) Sporidia hyalina
      - \* Paraphyses nullae; asci resulati
      - \*\* Paraphyses praesentes; asci conoideo-dispositi
    - β) Sporidia brunnea
      - \* Paraphyses nullae
      - \*\* Paraphyses praesentes
  - Hypostroma subcuticulare fasciculatum.
     Mycelium liberum praesens; sporidia phaeodidyma; paraphyses praesentes

LAUTERBACHIELLA P. Henn.

CYCLOTHECA Th.

HYSTEROSTOMELLA Speg. HYSTEROSTOMINA Th. et Syd.

LEMBOSIODOTHIS V. H.

- B. Ascomata superficialiter disposita, hypostromate intramatricali; disci ascigeri rotundati Po
  - sci ascigeri rotundati Polystomelleae Theiss. et Syd.
  - I. Ascomata centro inserta
    - a) Fasciculi hypostromatici subcuticulares
      - Mycelium superficiale praesens setulis erectis praeditum; paraphyses praesentes
      - 2. Mycelium superficiale praesens, hyphis longis erecto-adscendentibus terminatum; paraphyses nullae
      - 3. Mycelium nullum
    - b) Fasciculi hypostromatici nulli; ascomata centro radicata
      - 1. Ascomata singula, setuligera
      - 2. Ascomata aggregata, glabra
  - II. Ascomata varie inserta
    - a) Mycelium distinctum praesens; sporae didymae
      - Sporidia hyalodidyma; paraphyses praesentes; mycelium hyphopodiatum
      - 2. Sporidia phaeodidyma
      - a) Paraphyses nullae; mycelium ramosum
      - β) Paraphyses praesentes; hyphae simplices circa ascomata radiantes
    - b) Mycelium distinctum nullum
      - Disci ascigeri sub scutello commune dispositi, plechtenchyma hyalino separati
      - α) Paraphyses nullae
      - β) Paraphyses praesentes

Dothidasterostomella v. H.

SCOLIONEMA Th. et Syd. DOTHIDASTEROMA V. H.

ASTERODOTHIS Th. POLYRHIZON Th. et Syd.

ARMATELLA Th. ot Syd.

PLACOASTERELLA SACC.

HYSTEROSTOMA Th.

RHAGADOLOBIUM P. Henn. et Lind. Polystomella Speg.

- 2. Disci ascigeri scutello distincto separati
  - α) Sporidia continua hyalina; paraphys. praes.
  - B) Sporidia hvalodidyma
    - " Paraphyses nullae
    - \*\* Paraphyses praesentes
  - y) Sporidia phaeodidyma
    - \* Hypothecium hyalinum; disci ascigeri irregulariter distributi Paraphyses praesentes
      - .. Paraphyses nullae
    - \*\* Hypothecium carbonaceum; disci ascigeri circa partem centralem sterilem distributi; paraphyses praesentes
  - Sporidia hyalophragmia (4-loc.); paraph. praes.
  - s) Sporidia phaeophragmia (4-loc.); paraphyses nullae
- 3. Disci ascigeri concentrice dispositi, scutello distincto separati

ELLISIODOTHIS Th.

LEPTODOTHIS Th. et Syd. SYMPELTIS Syd.

PALAWANIA Syd. MELANOPLACA Syd

MARCHALIA Sacc.

GILLETIELLA Sacc. et Syd.

— Heterochlamis Pat. nec Turcz.

ACTINODOTHIS Syd.

PLEIOSTOMELLA Syd.

# Sect. 1. Hyalosporae

- ELLISIODOTHIS Theiss., Ann. Mycol. XII, 1914, p. 73; Theiss. et Syd. Ann. Mycol. XIII, 1915, p. 246; XV, 1917, p. 412. Ascomata mycelio libero destituta superficialia, ex hypostromate epidermali oriunda punctis pluribus affixa, supra radiato contexta, carbonacea. Disci ascigeri rotundati. Hypothecium incolore molliusculum. Asci paraphysati octospori. Sporidia hyalina, unilocularia. Typus gen. Ellisidothis inquinans (E. et Ev. in Asterina) Theiss., l. c. p. 73 tab. VI fig. 5, Asterula inquinans (E. et Ev.) Theiss., Ann. Mycol. 1912 p. 193.
- 1. Ellisiodothis Rhemiana (Th. et Syd.) Theiss. et Syd., Ann. Mycol. 4698 XIII, 1915, p. 248, XV, 1917, p. 412, Phyllachora Rhemiana Th. et Syd., l. c. XII, 1914, p. 184. Syn. Phyll. † Dioscoreae Rhem, Phill. Journ. Sc. 1913, p. 183, non Ph. Diosc. (Schw.) Sacc. Ascomata nigro-opaca e rotundata ellipsoidea magnitudine variabilia 180 μ diam. v. 250-350 × 180-200, ad caules late effusa; disci ascigeri solitari v. confluentes. † Asci (sec. Rhem) fusoidei, 50-60 × 15 octospori. Sporidia disticha, clavata hyalina unilocularia, 12-15 × 5-6. Paraphyses filiformes.

Hab. ad caules Dioscore a e sp. (Dioscoreaceae), Luzon, ins. Philippin.

2. Ellisiodothis microdisca Syd., Ann. Mycol. XV, 1917, p. 221. — Stro-4699 mata dense disposita, plerumque seriatim ordinata, superficialia, omnino orbicularia, 130 180 μ diam., discoidea, saepe confluentia, atra, opaca, subcarbonacea, radiatim contexta, ex hyphis 2-3 μ latis crebre septatis rectis vel subrectis composita; hypostromate epidermali; hypothecio hyalino fibroso; loculi discreti; strato obtegente tandem poro rotundo disrumpente; asci sessiles, clavati vel saccati, apice rotundati, 34-38 × 12-15, tenuiter paraphysati, octospori; sporae ovato-oblongae, continuae, hyalinae, utrinque obtusae, 10-12 × 4-5.

Hab. in foliis caulibusque Freycinetiae sp. (Pandanaceae), Biliran, Ins. Philipp. (R. C. Mc. Gregor).

3. Ellisiodothis Pandani H. et P. Sydow, Ann. Mycol. XII, 1914, p. 565.— 4700 Stromatibus ascigeris superficialibus, tota longitudine matrici adnatis, gregatim dispositis, subinde confluentibus, ambitu plerumque rotundatis, 0,3-1 mm. diam., atris, opacis, subcarbonaceis, radiatim contextis ex hyphis 3-5 μ latis crebre septatis (articulis 6-10 μ longis) rectis vel subrectis compositis; hypostromate epidermali, per stomata erumpente; poro rotundo disrumpente; ascis ellipsoideo-oblongis usque clavatis, apice rotundatis et incrassatis, 50-70 × 20-26, octosporis, copiose paraphysatis; sporidiis plerumque oblique monostichis usque distichis, ellipsoideis vel oblongo-ellipsoideis, utrinque obtusis, continuis, hyalinis, 17-20 × 8-10,5.

Hab. in foliis Pandani luzonensis (Pandanaceae), Angat prov. Bulacan, Ins. Philippin. (M. RAMOS).

### Sect. 2. Hyalodidymae

POLYSTOMELLA Speg. — Syll. IX p. 1063, XVI p. 639, XVII p. 865, XXII p. 522. — Onfr. Theissen et Syd., Ann. Mycol. XIII, 1915, p. 242.

1 Polystomella repanda Spegaz., Rel. Mycol. trop. in Bol. Ac. Nac. Cienc. 4701 Cordoba, t. 23., 1919, p. 144. — Stromata epiphylla majuscula 5-10 mm. diam., atra crustacea tenuia, difformia, ambitu irregulariter lobulato-repanda, hinc inde conferte v. laxe minuteque papillulato-ostiolata, contextu prosenchymatico-radiante fere opaco parum distincto: loculi sparsi parvi 150-200  $\mu$  subdiscoidei vix prominuli superne minute stellato-dehiscentes; asci obovati majusculi,  $80 \times 50$ ,

tunica crassa leniter violascente vestiti, aparaphysati, 6 8 spori; sporae ellipticae v. subovatae utrinque obtusiusculae, ad medium v. parum supra 1-septatae, non v. vix constrictae, loculis parum inaequalibus, supero saepius nonnihil breviore, primo hyalinae dein fuligineae,  $35.40 \times 16.18$ .

Hab. ad folia viva Ingae sp. (Leguminosae), in silvis prope Apiahy Brasilia (J. Puiggari).

2. Polystomella Kawagoii Hara, Botan. Mag. Tokyo XXIX, n. 338, p. 51 4702 (1915). — Stromatibus superficialibus, opace nigris, asperulis, parum gibbulosis, rotundatis v. irregulariter elongatis, 1 5 mm. long. 0,9-4 mm. latis 200-400  $\mu$  altis, coriaceo-carbonaceis; contextu stromatico brunneo, parenchymatico, cellulis polygoniis, 4-10  $\mu$  latis, v. rotundato-ovoideis, 70-120  $\approx$  50-80, densis, loculis verticaliter stratosis; paraphysibus nullis; ascis cylindraceis v. elongato-ovoideis infra plerumque parum ventricosis, breviter pedicellatis, distichis v. tristichis, 50-60  $\approx$  13-16, apice rotundatis tunica ibique 2-3  $\mu$  crassa; sporidiis hyalinis, ovoideis v. elipsoideis, utrirque rotundatis, uniseptatis, tunica tenui aequali praeditis, 16-20  $\approx$  3-4; loculo superiori quandoque parum crassiore sed breviore.

Hab. in utraque pagina foliorum Pruni macrophyllae et Pr. spinulosae (Rosaceae), Kagoshima, Japonia (KAWAGOI, UYEHARA, SASAKI).

3. Polystomella Rubiacearum G. Arnaud, Ann. École Nat. Agricult. Mont. 470 pellier, t. 16., 1918, p. 142, tab. XXIII. — Pol. pulcherrima Speg. 1889 p. p.

Hab. in foliis Rubiaceae cujusdam, Apiahy, Sao Paulo, Brasilia, America austr. (PUIGGARI). — Typus Pol. pulcherrimae Speg. ost fungus in foliis Solani boerhavifolii vigens.

POLYCYCLINA Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 212; XV, 4704
1917, p. 408. — Ascomata tenuiter crustacea, ex hypostromate subepidermico brunneo pluribus in locis erumpenti orientia, radiatim
contexta; disci ascigeri pluries concentrice annulatim dispositi.
Asci octospori aparaphysati. Sporidia bilocularia hyalina. — Typ.
gen. Pol. rhytismoides (Speg. ut Hysterostomella (1)) Th. et Syd.

CYCLOTHECA Theiss., Ann. Mycol. XII, 1914, p. 70; XIII, 1915, p. 221; 4705 XV, 1917, p. 409. — Ascomata superficialia, radiato-contexta (saltem margine), irregulariter extensa, ex hypostromate incolore informi oriunda; disci ascigeri lineares numerosi, irregulariter distri-

buti. Asci octospori, paraphysati, colliculo cuneiformi, plechtenchymatico ex hypothecio formato impositi. Sporidia bilocularia hyalina. — Typ. gen. Cycl. Miconiae (Syd. ut Polystomella) Theiss. l. c.

- ARMATELLA Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 235, XV, 1917, 4706 p. 410. Mycelium superficiale, ramosum, septatum, hyphopodiatum. Ascomata superficialia ex hypostromate epidermali extense oriunda, radiato contexta, punctis pluribus affixa, discum ascigerum unicum (an semper?) praedita. Asci paraphysati octospori. Sporidia hyalina bilocularia. Typus gen. A. Litseae (P. Henn. ut Dimerosporium) Theiss.
- LEPTODOTHIS Theiss. et Syd., Ann. Mycol. XII, 1914, p. 268, XIII, 4707 1915, p. 248, XV, 1917 p. 412. Ascomata tenuiter crustacea, contextu radiato, superficialia. Hypostroma ex hyphis copiosis intercellularibus mesophyllum late occupantibus efformatum. Disci ascigeri immersi. Asci cylindracei aparaphysati octospori. Sporidia hyalina bilocularia. Typ. gen. Lept. atramentaria (B. et C. ut Rhytisma) Th. et Syd., l. c.
- SYNPELTIS Syd., Ann. Mycol. XV, 1917, p. 221, XV, 1917, p. 412. Stromata superficialia, radiato-contexta, tenuiter crustacea, stomatibus innata; loculi immersi, discreti, rotundati; asci cylindraceo-clavati, 8-spori, paraphysati; sporae hyalodidymae.
- 1. Synpeltis Loranthi Syd., l. c. Stromata amphigena, saepius hypophylla, usque 1 cm. (vel ultra?) diam., tenuiter crustacea, atra, stomatibus innata, pluries affixa, usque 75 μ alta, radiatim ex hyphis pluristratosis periphericis fuligineis centralibus obscurioribus 2-3 μ crassis contexta; loculi plani, discreti; asci cylindraceo-clavati; breviter stipitati, 60 75 × 14-16, octospori; paraphyses copiosae, ascos superantes; sporae distichae, subfusoideae, ad apicem rotundatae, ad basim leniter attenuatae 1-septatae, non constrictae, hyalinae, 18-20 × 5.

Hab. in foliis Loranthi pentagoni (Loranthaceae), Banco, Bontoc, Ins. Philipp. (PAT. M. VANOVERBERGH).

# Sect. 3. Phaeodidymae

HYSTEROSTOMELLA Speg. — Syll. IX p. 1098, XI p. 385, XIV p. 708, XVI p. 655, XVII p. 892, XXII p. 556.

1. Hysterestemella circularis Har. et Pat. in Bull. Mus. Hist. Nat. Paris 4709 1911, p. 368. — Epi-rarius hypophylla; peritheciis numerosis concentrice 6-8 dispositis, coalitis, 6 mm. diam. attingentibus (singulo 0,5 mm.) exiguis, atris, dimidiato-convexis, basi in cuticulam impressis, circulatim rarius radiatim rima lineari dehiscentibus, distinctis dein margine in stroma compositum dimidiato-convexum, carbonaceum, ostiolis circularibus notatum confluentibus; peritheciis exterioris seriei diutius plus minusve distinctis; ascis numerosis, hyalinis, apice brunneolis rotundatisque, cylindraceis, fere sessilibus, 65 × 12; sporidiis distichis, primitus hyalinis dein pallide brunneis, ellipsoideis, 1-septatis, utraque apice rotundatis, ad septum non vel vix constrictis, 12 × 5-6; paraphysibus linearibus. Hab. in foliis arboris cujusdam coriaceis, Chari, Bongoran, Congo

gallico.

2. Hysterostomella Puiggarii Spegaz., mel. Mycol. trop. etc. in Bol. Ac. 4710

Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 148. — Ita vocanda Hyst.

rhytismoides Spegaz., quia jam extat Hyst. rhytismoides Rehm (= ?

Lembosia rhytismoides Schw.).

HYSTEROSTOMINA Theiss. et Syd., Ann. Myc. XIII, 1915, p. 228; XV, 1917, p. 409. — Est Hysterostomella paraphysata.

1. Hysterostomina tenella (Syd.) Th. et Syd., Ann. Myc. XIII, 1915, 4711 p. 228, Hysterostomella tenella Ex et P. Syd., Ann. Mycol. X, 1912, p. 442. — Stromatibus amphigenis v caules plus minus ambientibus, effusis irregularibus 2-10 μ long. tenuissime crustaceis, arcte adnatis, atris, glabris; loculis seu peritheciis numerosis, irregularibus, rimose v. irregulariter dehiscentibus, minutis; ascis primitus subglobosis v. ovatis cum sporidiis conglobatis, dein clavatis cum sporidiis distiche ordinatis, ad apicem valde incrassatis, 45-60 × 16-20, octosporis; sporidiis ellipsoideo-oblongis, utrinque rotundatis, medio v. circa medium 1-septatis et constrictis, ex hyalino brunneis, 14-17 × 7-8.

Hab. in foliis Asparagi striati (Liliaceae), Despatch pr. Uitenhage, distr. Uitenhage, Cape Prov. (J. B. Pole Evans), in caulibus ramisque Asparagi sp., Kentani, Cape Prov., Africa austr. (MISS A. PEGLER).

Hysterostomina Bakeri Theiss. et Syd., Ann. Mycol. XIV, 1916, 4713
 p. 444.— Stromatibus epiphyllis, rotundatis v. irregularibus, saepe confluentibus, 1 cm. usque latis, applanato-membranaceis, opace nigris, 70-100 μ altis; loculis confertis, rimose erumpentibus; con-

textu superne radiato, atro-brunneo; basi sporigera 10  $\mu$  cr.; ascis ovoideis, dein elongatis, 40-55 \* 16-22, 8-sporis; sporidiis initio conglobatis, dein subdistichis, 18-21 \* 67, oblongis, hyalinis dein brunneis, bilocularibus, non v. leviter constrictis, cellula sup. saepe breviore et latiore; paraphysibus subclavatis.

Hab. in foliis Astrocary i sp. (Palmae), Parà in Horto Goeldiano, Brasilia (C. F. BAKER).

- p. 359 (nomen nudum); Ann. Mycol. XV, 1917, p. 369. Mycelium superficiale. Ascomata superficialia valida. Hypostroma subcuticulare, dendritice contextum. Disci ascigeri elongati, scutello radiante praediti. Asci octospori, paraphysati. Sporidia brunnea bilocularia. Typus gen. Lemb. Dickiae v. Höhn. (= Aulographum maculare B. et Br. var. Dickiae Rehm).
- DOTHIDASTEROMELLA v. Höhnel, Fragm. z. Mykol. X n. 491 (1910); 4714 Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 229; XV, 1917, p. 409.— Mycelium superficiale setulosum. Ascomata superficialia centro adnata. Hypostroma subcuticulare, radiatum, margine lacinulatum. Disci ascigeri rotundati pauci scutellati Asci octospori, paraphysati. Sporidia bilocularia brunnea. Typ. gen. Doth. sepulta (B. et C.) v. Höhn.
- SCOLIONEMA Theiss. et Syd., Ann. Mycol. XV, 1917, p. 410. Do- 4715 thidasteromellae affinis sed differt mycelio superficiale hyphis setuliformibus erectis praedito, nec non ascis sporidiisque magnis, paraphysibus nullis. Typus gen. Sc. Palmarum (Kze. ut Myxothecium) Theiss. et Syd. (= Asterina Palmarum Gaill.)
- DOTHIDASTEROMA v. Höhn., Fragm. z. Mykol. IX, 1909, n. 443.— 4716

  Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 231; XV, 1917, p. 410.—
  Est Dothidasteromella mycelio superficiali destituta.— Typus gen.

  Doth. maculosum (B. et Br. ut Rhytisma) v. Höhn.
- ASTERODOTHIS Theiss., Ann. Mycol. X, 1912, p. 179 Theiss. et 4717 Syd., Ann. Mycol. XIII, 1915, p. 233; XV, 1917, p. 410. Ascomata superficialia, centro innata, carbonacea, supra radiato-contexta, periphaerice hyphas ramosas radiantia emittentia. Disci ascigeri rotundati in pulvinulo centrali inordinate dispositi. Asci octospori

paraphysati. Sporidia brunnea bilocularia. — Typus gen.: As. solaris (Kalch. et Cke. ut Asterina) Theiss. l. c. (Syn. Lembosia Albersii P. Henn., Seynesia elegantula Syd.).

- POLYRHIZON Theiss. et Syd., Ann. Mycol. XII, 1914, p. 281; XIII, 1915, p. 234; XV, 1917, p. 410. Ascomata superficialia, rotundata, orbicularia e pluribus ascomatibus circinantibus concreta; ascomata singula centro minuta, disci ascigeri rotundati immersi, hypothecio molliusculo, supra plechtenchymatico, marginem versus radiato-contexta. Asci octospori, paraphysati. Sporidia bilocularia brunnea.
- 1. Polyrhizon Terminaliae (Syd.) Theiss. et Syd., Ann. Mycol. l. c., 4718 Dothidea Terminaliae Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, p. 401. Stromate epiphyllo, orbiculari, 2·3 mm. diam., tenui, atro, crustaceo; peritheciis basi immersis, parte superiore protuberantibus, plus minus distincte circulariter dispositis, irregularibus, carbonaceis, ca. 200 μ diam.; ascis clavato-cylindraceis, paraphysatis, 70-90 × 14·16, octosporis; sporidiis distichis, oblongo-ellipsoideis v. ellipsoideis, medio v. circa medium 1-septatis et constrictis, uno fine rotundatis, altero plerumque leniter attenuatis, fuscis, asperulis, 17·24 × 7·10, loculo superiore, latiore.

Hab. in foliis Terminaliae Catappae (Combretaceae), Wynaad, Indiae or. (W. Mc RAE).

- PLACOASTERELLA Sacc., Ann. Mycol. VIII, 1910, p. 338. Theiss. 4719 et Syd., Ann. Mycol. XIII, 1915, p. 236; XV, 1917, p. 411. Mycelium superficiale, ramosum, septatum, exhyphopodiatum. Ascomata superficialia minuta asterinoidea, hypostromate epidermali innata, contextu interno et hypothecii laetiore molliusculo. Disci ascigeri pauci v. solitari. Asci aparaphysati octospori. Sporidia brunnea bilocularia. Typus gen. Pl. Schweinfurthii (P. Henn. ut Asterella) Sacc., nec non Pl. Rehmii (P. Henn. ut Asterella) Sacc.
- HYSTEROSTOMA Theissen, Ann. Mycol., XI, 1913, p. 509; Theissen et Syd., Ann. Mycol. XIII, 1915, p. 237, XV, 1917, p. 411.—Ascomata membranae epidermidis exteriori adnata, scutata, carbonacea, periphaerice in hyphas radiantes dissoluta. Disci ascigeri, pluries inordinate dispositi, centro colliculosi, rotundati v. elliptici. Asci paraphysati octospori. Sporidia phaeodidyma.
- 1. Hysterostoma evanescens (Rehm) Theiss. et Syd., l. c., Dothidella 4720

evanescens Rehm. Syll. XIV, p. 676. -- Syn. Hyst. Myrtorum Theiss. 1. c. p. 509, fig. VII. - Microthyrium pseudodothidea Rehm in litt., in Theissen, Broteria 1910, fasc. I p. 7. - Characteres generis. A. scomatibus epiphyllis, ambitu circulari 2-5 mm. diam.; hyphis radiantibus brunneis, arcte adpressis, 5 µ crassis, hyphopodiis destitutis; loculis dimensionibus maxime variantibus, rotundato-lenticularibus v. oblongatis, rima longitudinali dehiscentibus; aseis pro. fuse paraphysatis, cylindraceis, octosporis, supra rotundatis, infra breviter pedicellatis, 80-100 > 22-26, basi loculorum insertis; sporidiis distichis, diu hyalinis demum brunneis, 25-28 µ long., bicellularibus, cellula super. subglobosa, 10-13 g, infer. elongato-conoidea, 16 × 8.

Hab. in foliis Myrtaceae cujusdam, S. Leopoldo, Brasiliae merid.

2. Hysterostoma orbiculatum (P. et H. Syd.) Theiss, et Syd., l. c., Do- 4721 thidasteromella orbiculata Syd., Ann. Mycol. X, 1912, p. 41. - Stromatibus amphigenis, sparsis omnino orbicularibus, aterrimis, 3-6 mm. diam., erumpenti superficialibus, ca. 200-325 µ cr., subcarbonaceis, non confluentibus, superficie irregulariter rugulosis, ambitu hyphis longiusculis radiantibus longitudinaliter plerumque dense parallele connexis fuscis aequaliter crassis 4-6 \mu lat. distincte septatis vix v. leniter ramosis cinctis; stromatibus ascigeris v. peritheciis numerosis, dense stipatis, irregularibus, subinde curvulis, superne irregulariter dehiscentibus; ascis cylindraceo-clavatis v. clavatis, apice valde incrassatis et rotundatis, 75-140 × 16-32, octosporis; paraphysibus numerosis, crassiusculis, 24 µ cr.; sporidiis 1-2-stichis, elliptico-oblongis, utrinque rotundatis, medio 1-septatis et leniter constrictis, fuscis, 20-35 \* 12-16.

Hab. in foliis Oleae verrucosae (Oleaceae), Bains Kloof pr. Wellington, Africae Austr. (E. M. DOIDGE).

3. Hysterostoma Acokantherae (P. Henn.) Theiss. et Syd., Ann. Mycol. 4722 XIII (1915) p. 238; Sacc., Notae Mycol. XXII p. 189 (R. Acc. Pad. 1917). - Dimerosporium Acokantherae P. Henn. - Syll. XI p. 259.

Hab. in foliis vivis Acokantherae abyssinicae (Apocynaceae), Mai Alacti, Nefasit (Hamasen). - Pulchra species, quae nisi stromate superficiali esset praedita, ad Rhytismatoideas, e. gr. ad gen. Cocconiam, accedere videretur. Asci ampli, clavati, apice crasse tunicati, 80.90 × 30.35, octospori, copiose filiformi-paraphysati; sporidia constricto-didyma, disticha, initio strato hyalino cincta, 26-28 × 12, diu hyalina, senio brunnea.

- PALAWANIA Syd., Philipp. Journ. of Sc., Sect. C., Bot., IX, 1914, n. 2. p. 171. - Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 249; XV. 1917, p. 412. - Ascomata superficialia, carbonacea, radiato-contexta. ex hypostromate subepidermali per stomata erumpenti oriunda. Hypothecium tenue. Disci ascigeri rotundati inaequaliter distributi. discreti. Asci paraphysati octospori. Sporidia phaeodidyma. - Typ. gen. Pal. grandis (Niessl ut Microthyrium) Syd., l. c. cum icon.-Syn. Seynesia calamicola P. Henn. et Nym.
- 1. Palawania Cocoes Sydow, l. c. p. 172 f. 4. Stromatibus ascigeris 4723 tota longitudine matrici adnatis, superficialibus, minoribus rotundatis vel oblongis et 0.3-1 mm. longis saepe plus minus confluentibus et tunc multo majoribus, usque 8 mm. longis, atris, opacis, carbonaceis, pluristratosis, in medio crassis, marginem versus tenuioribus, radiatim ex hyphis fuscis 3,5-4,5 u latis crebre septatis (articulis 6-9 µ longis) rectis vel fere rectis contextis, ad ambitum integris vel lenissime crenatis; bypostromate sub epidermide bene evoluto, strato basali tenui fusco, hypothecio fibroso: loculis in stromatibus minoribus duobus vel paucis, in stromatibus majoribus copiosioribus, discretis, haud confluentibus, non ostiolatis, sed strato obtegente tandem poro rotundo disrumpente; ascis ellipsoideis, sessilibus, apice rotundatis et incrassatis, 50-75 \* 20-26, octosporis; paraphysibus numerosissimis, hyalinis, filiformibus, sursum saepe leniter mucoso-conjunctis; sporidiis distichis usque tristichis, oblongo-ellipsoideis, utrinque obtusis vel leniter attenuatis, medio vel circa medium 1-septatis et leniter constrictis, ex hyalino fuscis. 22-24 \* 8-10.

Hab. in bracteis Cocoes nuciferae (Palmae), Palawan Taytay, Philippin. (MERRILL).

- MELANOPLACA Sydow, Ann. Mycol. XV, 1917, p. 222, p. 412. Ascomata tenuiter crustacea, contextu radiato, superficialia, ex hypostromate epidermali oriunda, ubique affixa, carbonacea, loculis rotundatis discretis, mycelio libero nullo; hypothecium pallidum, molliusculum; asci octospori aparaphysati. Sporae phaeodidymae.
- 1. Melanoplaca Dipteridis Syd., l. c. Stromata in maturitate plus minus 4724 late effusa, epiphylla, tenuiter crustacea, plura cm. metientia, atra orbicularia, ex hyphis dense connexis flavo-brunneis vel brunneis 2,5-3,5 \mu crassis parallelis septatis composito, superficialia, hypostromate epidermali opaco denso, hypothecio pallido usque subhyalino tenui 10-15 µ crasso, loculi copiosi, dense dispositi, rotundati,

90-130  $\mu$  lati, 65-90  $\mu$  alti, opaci, discreti, ex hyphis radiantibus obscure olivaceo-fuscis fere opacis ca. 4  $\mu$  crassis copiose septatis compositi; in maturitate rotundate vel plus minus irregulariter aperti; asci ovati vel oblongo ovati, aparaphysati, 8-spori, 42-50  $\times$  25-36; sporae oblongae, utrinque rotundatae, 3-4-stichae, ex hyalino olivaceo-fuscae, medio septatae non vel vix constrictae, 20-22  $\times$  8-9, loculis fere aequalibus vel supero paullo breviore sed latiore.

Hab. in foliis Dipteridis conjugatae (Polypodiaceae), Panai, Benguet, Ins. Philipp. (MARY STRONG CLEMENS).

- PARMULINA Theiss. et Sydow, Ann. Mycol. XII, 1914, p. 194; XIII, 1915, p. 195; XV, 1917, p. 406. Ascomata rotundata superficialia, radiatim contexta, centro adnata. Disci ascigeri e centro radiantes. Asci octospori paraphysati. Sporidia bilocularia brunnescentia. Typ. gen.: Parm. exculpta (Berk.) Th. et Syd., etc
- Parmulina? asterophora G. Arnaud, Ann. École Agricult. Montpellier t. 16., 1918, p. 118, tab. X. Stromatibus 1,2 mm. diam., carbonaceis, circularibus, margine lobulatis lacinulatisque; ascis oblongis, ventricosis, erectis, strato paraphysoideo circumdatis; sporidiis bilocularibus brunneis, 16,5 × 7,5, loculis subaequalibus.

Hab. in foliis Miconiae (Melastomataceae), San Francisco das Campos, San Paulo, Brasiliae (F. NOAK).

- MONORHIZA Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 218; XV, 4726 1917, p. 409. Ascomata rotundata, superficialia, tenuiter crustacea, radiatim contexta, centro innata. Disci ascigeri numerosi, lineares, irregulariter distributi. Asci octospori, paraphysati. Sporidia bilocularia brunnea. Typ. gen. Mon. longissima (Rac. ut Lembosia) Th. et Syd., Mon. nervisequia (Berk., Sacc. ut Dothidella) Th. et Syd.
- MONORHIZINA Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 220; XV, 4727 1917, p. 409. A gen. Monorhiza tantum differt quia aparaphysatum. Typ. gen. Mon. filicina (Bk. et Br., ut Rhytisma) Th. et Syd.
- RHIPIDOCARPON Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 197; 4728 XI, 1913, p. 456 (ut Subgen.); XI, 1917, p. 406. Ascomata flabellata, ex hypostromate subepidermico lateraliter orta, superficialia, radiatim contexta. Disci ascigeri lineares e centro radiantes. Asci

octospori, paraphysati. Sporidia brunnea bilocularia. — Typ. gen.: Rh. javanicum (Pat.) Th. et Syd.

- POLYCYCLUS v. Höhn., Fragm. z. Myk. IX, n. 465 (1909); Theiss. et 4729 Syd., Ann. Mycol. XIII, 1915, p. 210; XV, 1917, p. 408. Ascomata superficialia, radiatim contexta, centro adnata. Disci ascigeri annulatim concentrice dispositi, quandoque interrupti. Asci octospori, aparaphysati. Sporidia bilocularia brunnea, inaequaliter septata. Typ. gen. Pol. andinus (Pat. ut Hysterostomella) Th. et Syd.
- INOCYCLUS Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 211; XV, 1917, p. 408. Ascomata superficialia, radiatim contexta, centro adnata. Disci ascigeri annulatim dispositi margine radiantes. Asci octospori, aparaphysati. Sporidia bilocularia brunnea. Typ. gen. spec. saeq. nec non In. Myrtacearum (Rehm ut Hysterostomella) Th. et Syd.
- 1. Inocyclus Psychotriae (Syd.) Th. et Syd., l. e., Hysterostomella Psydhotriae Syd., Enum. Philipp. Fgi., I, in Philipp. Journ. of Sci. VIII (1913) p. 275. Stromatibus hypophyllis, plerumque plus minusve dense aggregatis, subinde 1.2 confluentibus, plerumque rotundatis, 0,5-1,25 mm. diam., atris, opacis, superficialibus, planis, membranaceis, facile secedentibus, centro plerumque tuberculo minuto punctiformi praeditis, marginem versus irregulariter radiatim contextis ibique ex hyphis dense connatis, fuscis, 2·3 μ cr. compositis; loculis irregulariter dehiscentibus, tandem late apertis; ascis clavatis, apice rotundatis, deorsum leniter attenuatis, subsessilibus, aparaphysatis, 32-40 × 8 10, octosporis; sporidiis distichis, intra ascos tantum visis, 1-septatis, oblongis, 9-12 × 3-4, fuscidulo-coerulescentibus, sed haud jam maturis.

Hab. in foliis vivis Psychotriae luzoniensis (Rubiaceae), Luzon, Prov. Rizal, Antipolo (M. Ramos). — Fructificatio immatura, inde species rursus inquirenda.

COCCONIOPSIS G. Arnaud, Ann. École Nat. Agricult. Montpellier, t. 16., 4731 1918, p. 113, tab. VIII. — Stroma centro tantum radicato; loculo ascigero annulari, simplici. Sporidia bilocularia, locula subaequalia, hyalina v. brunnea. — Gen. inter Polycyclus et Inocyclus medium. Species typica Scolecopeltis Theisseni Rick p. p. et tunc Cocconiopsis Theisseni (Rik!) Arnaud vocanda.

# Sect. 4. Hyalophragmiæ

GILLETIELLA Sacc. et Syd. - Syll. XIV p. 691.

1. Gilletiella apiahyna Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 4732 Cienc. Cordoba, t 23, 1919, Extr. p. 146. — Amphigena; thallus superficialis suborbicularis lobulatus, prosenchymatico-radians subhyalinum parum perspicuum per aetatem subevanescens; thyriothecia primo thallo albo tecta, serius nuda scutato-dimidiata; 150-200 μ diam., atra nitidula coriacea, ostiolo latiusculo rotundo 20 μ diam. perforata; asci obclavulati, apice obtuse rotundati, basi cuneati breviter erasseque pedicellati, 8-spori, 75-50 × 9, paraphysibus filiformibus hyalinis obvallati; sporae distichae angustae subfusoideae, utrinque acutiuscule rotundatae, initio 1-, dein 3- septatae, ad septa non constrictae, hyalinae, 13-15 × 3.

Hab. ad folia coriacea viva Lauraceae?, prope Apiahy, Brasilia (J. Puiggari).

2. Gilletiella late-maculans Rehm, Ascomyc. Philipp. VI, Leaflets of 4733 Philipp. Botany, VI (1914) p. 2278. — Peritheciis dimidiato-scutatis, discoideo-convexulis, nigris, poro vix conspicuo pertusis, 300-500 μ diam, in medio thalli superficialis vegetativi, membranaceiradiatim prosenchymatice excurrentis, subhyalinis formatis, parenchymatice fusce contextis, siecis applanatis, irregularibus; thallis mox confluentibus in maculas orbiculares 1 cm. circ. latas, viridulas, interdum obscurius marginatas; ascis clavatis, apice valde incrassatis, 40-45 × 12-15, octosporis, paraphysibus gelatinoso-conglutinatis intermixtis; sporidiis tristichis, oblongo-clavatis vel fusiformibus, rectis, 3-(interdum 2-) septatis, non constrictis, hyalinis, senectute interdum fuscidulis, 12-15 × 3-4.

Hab. ad « Arenyam », Los Baños, ins. Philipp. (S. A. REYES).

# Sect. 5. Phaeophragmiæ

ACTINODOTHIS Sydow, Philipp. Journ. of Sc. Sect. C., Bot., IX, n. 2, 1914, p. 174. — Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 254, XV, 1917, p. 413. — Ascomata superficialia, orbicularia, radiatocontexta, pluristratosa; disci ascigeri 1-plures discreti, ex hypostromate epidermali parco oriundi, pluries affixi, hypothecio tenui, laeto, fibroso. Margine in hyphas liberas radiantes ramosas dissoluto. Asci aparaphysati bispori. Sporidia brunnea 4-5 locularia.

1. Actinodothis Piperis Sydow, l. c. p. 175 f. 6.— Stromatibus epiphyllis, 4734 singulis subinde hypophyllis, sine maculis, sparsis, superficialibus, ambitu semper orbicularibus, 1,5-3 mm. diam., discoideis, lenissime convexis, parte marginali plano quasi alatis, carbonaceis, opacis, radiatim contextis, centro ex hyphis crebre septatis compositis, parte marginali libero matrici haud adnato ex hyphis radiantibus valde dendriticeque ramosis (ramulis obtusis) fuscis 7-12 μ latis septatis (articulis 9-15 μ longis) composito; loculis 1 vel pluribus, sive paucis (2-4), sive copiosioribus (usque 15) in quoque stromate, discretis, haud confluentibus, non ostiolatis, sed tandem superne apertis, minutis; hypostromate in vel sub epidermide parce evoluto, filiformi, hypothecio pallido, strato basali tenui brunneolo; ascis ovatis vel oblongo-ovatis, apice obtusis, bisporis, aparaphysatis, 42-50 ≈ 20 26; sporidiis parallele positis, oblongis, utrinque late rotundatis, 3-4 septatis, ad septa leniter constrictis, fuscis, 33-40 ≈ 12-15.

Hab. ad folia viva Piperis sp. (Piperaceae), Palawan, Taytay Mt. Capoas, in ins. Philippinis.

# Sect. 6. Hyalodictyæ

- MENDOGIA Rac. 1900.— Syll. XVI, 669. Syn. Uleopeltis Hen. 1904.— 4735 Syll. XVII p. 872. Huc pertinent Mendogia bambusina Rac. (= Mendogia bambusina Syd., Ann. Myc. XII 1914, p. 565 fig. 3, sub Uleopeltis), Mend. manaosensis (P. Henn.) Th. et Syd.
- PLEIOSTOMELLA Syd., Ann. Mycol. XV, 1917, p. 221, p. 413. Stromata superficialia, orbicularia, pluries affixa, hypostromate epidermali radiato-contexta, carbonacea, mycelio libero nullo, loculis annulatim dispositis sed discretis, rotundatis; hypothecium brunneolam; asci clavati, 8-spori, paraphysati; sporidia murali divisa, hyalina.
- 1. Pleiostomella philippinensis Syd., 1. c. Stromata ascophora superficialia, sparsa, rotundata 2-4 mm. diam., plana, obscura brunnea, 140-180 μ alta, radiato-contexta strato tegente opaco 30-35 μ crasso, hypothecio brunneolo 15-20 μ crasso; loculi numerosi, dense concentriceque dispositi, sed discreti, rotundati, 70-170 μ lati; asci clavati, 42-55 × 16-19, ad apicem incrassati, octospori, paraphysibus mox mucosis praesentibus; sporae distichae, oblongae utrinque rotundatae, hyalinae (an semper?) transverse 5-6-septatae ad septum saepe constrictae, septis tenuissimis, cellulis pluribus vel omnībus

septo longitudinali vel obliquo divisis, plasmate granuloso 16-18 ¥ 5-6.

Hab. in foliis Palmae cujusdam indet., Biliran Ins. Philipp. (R. C. Mc GREGOR). - Habitus fere Uleopeltis.

### Sect. 7. Scolecosporæ

- CHAETASPIS Syd., Ann. Mycol. 15., 1917, p. 219.—Stromata orbicularia, superficialia, irregulariter radiato-contexta, puncto centrali orbicularia, superficialia hyphis vel setulis erectis tecta, centro sterili, loculis ascigeris e centro radiatim divergentibus linearibus. Asci paraphysati, octospori. Sporidia bicellularia, pallide olivacea. Conidia continua, aciculari-fusoidea, hyalina.
- 1. Chaetaspis Stenochlaenae Syd., l. c. Stromata hypophylla, singula 4787 subinde etiam epiphylla, facillime secedentia, orbicularia, 2-4 mm. diam., superficialia, centro affixa ad superficiem hyphis vel setulis erectis continuis ad apicem obtuse attenuatis atro-olivaceis solitariis vel ad basim paucis coalitis, 70-120 µ longis 2-2,5 latis, laxe obsita, centro sterili pro ratione (praecipue in stromatibus junioribus) magno, 2/4-11/4 mm. diam.; irregulariter irradiatim ex hyphis remote septatis rectiusculis pallide brunneis vel olivaceo-brunneis 2-2,5 µ latis ad peripheriam autem saepe anastomosantibus et irregulariter contextis composita; loculi e centro peripheriam versus radiatim positi, subinde irregulariter positi, usque 1 mm. longi, rima 70-100 µ lata aperti; asci parce paraphysati, clavati, 40-50 \* 10-12,5.

Hab. in foliis Stenochlaenae palustris, Prov. Laguna (Mc. GREGOR), San Atonio Prov. Laguna, Ins. Philipp. (M. RAMOS).

### Subfam. 3. Microthyrieae.

#### Trib. 1. Microthyrinae

Conspectus, Gen. Microthyriacearum sec. Th. et Syd.

- 3. Microthyriaceae (Sacc., Syll. Fung. II (1883) p. 658). Theissen, Myc. Centralbl. 1913, p. 281; Theiss. et Syd., Ann. Mycol. 15., 1917, p. 413.
- MICROTHYRIEAE Sacc. et Syd. A. Mycelium distinctum nullum
  - I. Hymenia polyasca
  - a) Thyriothecia (fructificatio) rotundata

1. Speridia continua hyalina

- a) Paraphyses praesentes
- 3) Paraphyses nullae
  - 2. Sporidia bilocularia
- a) hyalina
- β) brunnea
- 3. Sporidia trilocularia, brunnea
- 4. Sporidia 4-plurilocularia

2) hyalina

- \* Thyriothecia setulis destituta
- \*\* Thyriothecia setulis peristomalibus praedita
- β) brunnea ·
- b) Thyriothecia linearia
  - Sporidia hyalodidyma; paraphyses nullae
  - 2. Sporidia phaeodidyma
  - a) Paraphyses praesentes
  - 3) Paraphyses nullae

II. Hymenium monascum

- a) Asci in coronam periphaericam distributi
- b) Asci diffusi
  - 1. Sporidia phaeophragmia
  - 2. Sporidia hyalodictya

B. Mycelium distinctum praesens

- I. Thyriothecia hymeniis plurimis praedita
- II. Hymenium singulum (polyascum)
- x. Thyriothecia rotundata
  - a) Sporidia continua hyalina
  - b) Sporidia hyalodidyma
    - a) Sporidia caudata; hyphopodia praesentia
    - β) Sporidia ecaudata; hyphopodia nulla
  - c) Sporidia phaeodidyma
    - a) Hyphopodia nulla
      - 1. Thyriothecia glabra, non incrustata
    - 2. Thyriothecia setuligera, mucoso-in-
    - Thyriothecia glabra, non incrustata; mycelium leve, conidiis quadrilocularibus praeditum

MYIOCOPRON Speg. PELTELLA Syd.

MICROTHYRIUM Desm. SEVNESIA Sacc. (= Ferrarisia Sacc.) SCUTELLUM Speg.

PHRAGMOTHVRIUM V. H.

CAENOTHYRIUM 'Th. et Syd. HALBANIA Racib.

AULOGRAPHELIA V. H.

LEMBOSINA Th.
MORENOINA Th.

STEPHANOTHECA Syd.

PYCNOPELTIS Syd. PYCNODERMA Syd.

ASTERINEAE Sacc. et Syd.

SYMPHASTER Th. et Syd.

CALOTHYRIELLA V. H.

CAUDELLA Syd. CALOTHYRIUM Th.

ASTERINELLA Th.

ASTEROMYXA Th. et Syd.

CLYPEOLINA Th.

4. Mycelium setuligerum, conidiis quadrilocularibus praeditum; thyriothecialevia, non incrustata

THALLOCHARTE Th.

β) Hyphopodia praesentia

1. Conidia mycelica quadrilocularia

CLYPHOLELLA V. H.

2. Conidia mycelica unilocularia v. nulla

\* Thyriothecia demum mucosoincrustata

ENGLERULASTER V. H.

\*\* Thyriothecia non incrustata

\* Paraphyses praesentes

s praesentes Parasterina Th. et Syd.

\*\* Paraphyses nullae

ASTERINA Lév. (Syn. Dimerosporium Fuck., Myxasterina v. H.)

d) Sporidia transverse plurilocularia

a) Sporidia hyalina

β) Sporidia brunnea

HALBANIELLA Th. AMAZONIA Th.

e) Sporidia muriformia rubescentia

YATESULA Syd.

××. Thyriothecia linearia

a) Asci 10-12 spori; sporidia continua brunnea

LEMBOSIELLA Sacc.

b) Asci 3-spori; sporidia bilocularia

a) Sporidia hyalina; hyphopodia nulla

\* Paraphyses praesentes

\*\* Paraphyses praesen

LEMBOSIOPSIS Th. AULOGRAPHUM Lib.

β) Sporidia brannea

\* Hyphopodia nulla

. Paraphyses praesentes

.. Paraphyses nullae

ECHIDNODES Th. et Syd. ECHIDNODELLA Th. et Syd.

\*\* Hyphopodia praesentia

. Paraphyses praesentes .. Paraphyses nullae

LEMBOSIA LÉV. MORENOELLA Speg.

Genera removenda quia incertae sedis: Actiniopsis Starb., Asteridiella Mc Alp., Chaetothyrium Speg., Kusanobotrys P. Henn., Ophiopeltis Alm. et Cam., Pemphidium Mont., Phaeosaccardinula P. Henn., Piptostoma B. et Br., Saccardinula Speg., Trichothyrium Speg., Trichopeltopsis v. H., Schenckiella P. Henn. (Agyrieae sec. Th. et Syd.).

Genera reiciouda: Cryptopeltis Rehm (Lichen), Puiggariella Speg. (Lichen), Asteropeltis P. Henn. (Lichen), Asterella Sacc. (= Asterina), Asterula Sacc. (= Venturia), Asteronia Sacc. (= Asterostomella v. Vizella), Asteridium Sacc. (= Meliola).

#### Sect. 1. Hyalosporae

MYIOCOPRON Speg. — Syll. II p. 659, IX p. 1053, XI p. 379, XIV p. 686, XVI p. 633, XVII p. 861.

1. Mylocopron umbilicatum Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. 4738 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 134. — Subiculum nullum; thyriothecia amphigena, hinc inde gregaria usque 3-5 mm. diam., parva, 150-250 mm. diam., scutato dimidiata, atra glabra opaca coriacea, eximie umbilicato-osticlata, contextu prosenchymatico-radiante peraegre perspicuo; asci e membrana basali exsurgentes constipati ovati v. late elliptici, 50 × 30, pseudoparaphysibus crassis subcoalescentibus cincti, 8-spori; sporae ellipsoideae utrinque rotundatae, laeves, hyalinae, 18 × 11.

Hab. ad folia dejecta subputrescentia Bignoniace a e cujusdam (? Amphilophium), prope Apiahy, Brasilia (J. Putg-GARI).

2. Myiocopron Caseariae Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires, XXIII (1912) p. 79. — Peritheciis epiphyllis, laxissime gregariis, dimidiato-scutatis, vix convexulis, 350-500 μ diam., atris, tenui-membranaceis, subiculo omnino carentibus, contextu centro fusco, ambitu subhyalino et subanhysto, obscure ostiolatis; ascis obclavatis, crassiuscule tunicatis, filiformi-paraphysatis, 80 × 15-18; sporidiis clavulatis, rectis vel leniter inaequilateris, medium infra abrupte attenuatis basique acutatis, continuis, hyalinis, 25-30 × 5-6.

Hab. in foliis vivis Caseariae silvestris (Flacourtiaceae), in dumetis prope Calilegna, Jujuy, Argentina.

3. Myiocopron Pandani v. Höhnel, Ann. Mycol., 17., 1919, p. 115. — 4740 Thyriotheciis nigris, epiphyllis in plagulis indefinitis crassiusculis, irregulariter rotundatis v. elongatis 200-500 μ long. 100-200 μ latis, saepe 2-3 confluentibus; scutellis obscure brunneis parum subpellucidis, hyphis 2-4 μ cr. radiantibus praeditis, margine fimbriatulo; subiculo nullo; ostiolo irregulari plus minus elongato demum lato; ascis late ellipsoideis supra crasse tunicatis, poro praeditis, 26-30 × 18-20; sporis hyalinis, tenuiter tunicatis, contentu granuloso, semper continuis, elongato-ellipsoideis v. leniter clavatis, utrinque rotundatis, in ascos coacervatis, 12-15 × 5-8; paraphysibus praesentibus.

Hab. ad folia sicca Pandani sp. (Pandanaceae), in Horto Bot. Buitenzorg, Java (v. Höhnel). — Ad Lembosieas transiens.

4. Myiocopron Stigmatostalycis P. Henn., Hedw. v. 48 (1908), p. 11.— 4741 Peritheciis gregariis, superficialibus, atris, scutellato-dimidiatis, poro pertusis, cellulosis, 250-300 μ circ. diam., confluentibus, atro-subcrustaceis, margine fibrosis; ascis clavatis, apice rotundatis, octosporis, paraphysatis, 45-60 × 13-18; sporidiis subdistichis, ellipsoideis vel ovoideis, granuloso-farctis, continuis, hyalinis, 8-13 × 4,5-5,5.

Hab. in pseudobulbis Stigmatostalycis radicantis,
Capital, S. Paulo, Brasilia.

- PELTELLA Sydow, Ann. Mycol. 15., 1917, p. 237, p. 416. Thyriothecia superficialia, dimidiata, inversa, radiata, saepe confluentia, mycelio nullo; asci ovati octospori, aparaphysati; sporidia continua, hyalina. Est Myiocopron aparaphysatum.
- 1. Peltella conjuncta (Syd.) Syd., l. c., Mylocopron conjunctum H. et P. 4742 Sydow, Ann. Mycol. XII, 1914, p. 200. Peritheciis epiphyllis, omnino superficialibus, dense per totam foliorum superficiem distributis eamque omnino aequaliterque obtegentibus, plerumque compluribus valde approximatis et omnino confluentibus, atris, singulis 100-160 μ diam., contextu radiatim prosenchymatico fuligineo ex hyphis amoene radiantibus rectis 2-2,5 μ crassis crebre septatis (articulis 8-12 μ longis, in centro 5-6 μ longis) composito; ascis ovato-globosis, 28-32 \* 20-25, mucose paraphysatis; sporidiis conglobatis, ovatis vel ovato-oblongis, continuis (an semper ?), hyalinis, 14-17 \* 7-8, intus multiguttulatis.

Hab. in foliis Demonoropis (Palmae), Los Baños prov. Laguna ins. Philippin. (C. F. BAKER).

# Sect. 2. Hyalodidymae

MICROTHYRIUM Desm.— Syll. II p. 662, IX p. 1055, XI p. 379, XIV p. 687, XVI p. 635, XVII p. 862, XXII p. 516.

1. Microthyrium Ramosii Syd., Ann. Mycol. XV, 1917, p 238. — Thy- 4743 riothecia hypophylla, in greges 3.6 mm. diam. parum perspicuos densiuscule disposita orbicularia, 70-90 μ diam., radiatim ex hyphis rectis creberrime septatis (articulis centralibus fere cubicis 2,5-3,5 μ diam., marginem versus longioribus, periphericis usque 6 μ longis) fuscidulis composita, ambitu hyphis perpancis tenerrimis hyalinis vel subhyalinis cincta vel suffulta; asci ovati ad apicem rotundati, aparaphysati, octospori, 25-34 × 12-15; sporae ovato-ellipsoideae vel oblongae, medio 1-septatae, non constrictae, hyalinae, 10-12 × 3-4.

Hab. in foliis Aganosmae acuminatae (Apocynaceae), Rizal, Luzon, Ins. Philipp. (M. Ramos).

Microthyrium annuliforme H. Sydow, Ann. Mycol. XII, 1914, p. 488. — 4744
 Thyriotheciis epiphyllis, maculis orbicularibus 4-8 mm. diam., sordide albidis lenissime bullatis insidentibus, praecipue ad marginem

macularum annuliformiter dispositis, rotundatis, 100-140  $\mu$  diam., atris, ex hyphis rectis crassis 3,5-4,5  $\mu$  latis crebiuscule septatis (articulis 9-12  $\mu$  longis) fuscis amoene radiantibus strato simplici compositis; ascis aparaphysatis, globulosis usque ovatis, 8-sporis, 35-45  $\approx$  30-35; sporidiis conglobatis, ovato-ellipsoideis, infra medium 1-septatis, loculo supero 10-14  $\mu$ , infra 6-8  $\mu$  longo, totis 18-23  $\approx$  7-10, hyalinis, rotundatis.

Hab. in foliis vivis Capparidis sepiariae (Capparidaceae), Iruttupallam, Coimbatore Madras Pres., Indiae or. (W. Mc RAE).

3. Microthyrium Imperatae H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4745 561. — Thyriotheciis superficialibus, sine maculis et sine mycelio, sparsis v. saepius maculiformiter aggregatis, orbicularibus, 100-150  $\mu$  diam., atris, sub microsc. pellucide v. fere pellucide castaneo-brunneis, circa porum centralem rotundum 10-12  $\mu$  latum atris et opacis, ex hyphis semper rectis 2,5-3  $\mu$  latis crebre septatis (articulis 4-7  $\mu$  longis) amoene radiatim contextis, ad ambitum breviter fimbriatis; ascis anguste saccatis, sessilibus, ad apicem obtuse attenuatis et incrassatis, 40-50  $\times$  10, octosporis, aparaphysatis; sporidiis distichis, fusiformibus, medio 1-septatis, non constrictis, utrinque attenuatis, hyalinis, 12-15  $\times$  2,5.

Hab. in foliis languidis v. subemortuis Imperatae cylindricae (Graminaceae), Angat pr. Bulacan, Philippin. (M. RAMOS).

4. Microthyrium senegalense Speg. in Anal. Mus. Nac. Buenos Aires 4746 XXVI p. 128 (1914) c. ic. — Peritheciis in matrice sordide cinerascente superficialibus, sparsis vel laxissime gregariis, atris, dimidiato-scutatis, convexulis, 150-300  $\mu$  diam., astomis, glabris, coriacellis contextu indistincto atro opaco; ascis ellipsoideo-cylindraceis, vix pedicellatis, aparaphysatis, 30  $\star$  10; sporidiis distichis, ellipsoideo-subclavulatis, antice rotundatis, postice subacutiusculis, non vel lenissime inaequilateris, medio septatis, non constrictis, eguttulatis, hyalinis,  $9 \star 3$ .

Hab. in culmis aridis subputrescentibus Penicillariae hyphoidis (Graminaceae), in sepibus circa Daccar, Senegal.

5. Microthyrium Lauraceae P. Henn., Hedw. v. 48 (1908) p. 109. — Pe- 4747 ritheciis epiphyllis, gregarie sparsis, dimidiato scutatis, atris, 1 mm. circ. diam., poro pertusis, contextu reticulato-celluloso, margine radiato; ascis ovoideis, apice rotundatis, tunicatis, 4-8-sporis, 40-65 × 40-45; sporidiis conglobatis, fusoideis, utrinque subacutis vel obtusiusculis, curvulis, 1-septatis, constrictis, hyalinis, 25-35 × 8-10.

Hab. in foliis Lauraceae, Rio Trombetas, ? Parà (A. DUCKE). 6. Microthyrium Browneanum Sacc., Notae Mycol. XXIV, p. 12 (Bull. 4748 Orto bot. Napoli, 1918). - Epiphyllum, remote sparsum, nigrum, superficiale, dimidiatum; peritheciis omnino applanatis, circularibus, subastomis, 600-800 µ diam., contextu irregulariter celluloso, non radiato, fuligineo, ambitu in marginem latiusculum hyalinum extenuato; ascis late ellipsoideis, utrinque obtuse rotandatis, 64 \* 52. basi apiculato-stipitatis, aparaphysatis, subtetrasporis; sporidiis parallele 4-seriatis, tereti-oblongis, utrinque obtusis v. acutiusculis, saepe curvatis, constricto-1-septatis, 35-40 \* 12-14, hyalinis.

Hab. in foliis Browneae grandicipitis et Saraeae sp. (Leguminosae), in Horto bot, Singapore (BAKER). - Pluribus speciebus e. g. M. longisporo, M. Boivini, M. Coffeae et imprimis M. Millettiae affine, tamen notis datis videtur sat diversum. Ob contextum non radiantem ad gen. Dictyothyrium esset referendum-

7. Microthyrium patagonicum Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4749 Buenos Aires XXIII (1912) p. 78. - Peritheciis hypophyllis, sparsis, minutissimis, 85-100 µ diam., scutiformibus, vix convexulis, atris, centro umbilicatis et stellatim perforatis, ambitu integerrimis, membranaceo-parenchymaticis, hyphis pancis (3-6) radiantibus repentibusque, 25-50 \* 2-3, chlorinis, simplicibus ornatis, contextu olivaceo; ascis subellipsoideis, brevissime crasseque pedicellatis, apice tunicam incrassatam praebentibus, 30 × 10-14, aparaphysatis, 6-8-sporis; sporidiis 2-3-stichis, subclavulatis, non vel vix inaequilateris, medio septatis, non constrictis, hyalinis, 12-14 × 3-4.

Hab. in foliis vivis Myrti lumae (Myrtaceae), in dumetis secus lacum Nahuel-Huapi, Argentina. - Jam extat Micr. patagonicum Speg. 1909 (enfr. Sylloge XXII p. 516) tamen haec nova species nomine servanda, quia species anterior ad nov. gen. Stomiopeltella relata est.

8. Microthyrium Grammatophylli Sacc., Notae Mycol. XXIV p. 11 (Bull. 4750 Orto bot. Napoli, 1918). - Punctiforme, late et crebriuscule gregarium, nigrum plerumque epiphyllum, superficiale, dimidiatum; peritheciis plano-convexis, ambitu circularibus, 325-450 µ diam., anguste pertusis, contextu obscure celluloso, non radiato, fuligineo, margine cellulis teretiusculis apice rotundatis brunneis fimbriato; ascis breviter clavatis, brevissime noduloso-stipitatis, 45-50 \* 16, saepe obliquis, 4-6-sporis, filiformi-paraphysatis; sporidiis tereti-oblongis, distichis, subinde clavulatis apice magis rotundatis, 22 × 6, diu continuis, dein medio 1-septatis non v. vix constrictis, egut-

tulatis, hyalinis.

Hab. in foliis emortuis Grammatophylli speciosi (Orchidaceae), culti in Horto bot. Singapore (BAKER). — Ob contextum non radiatum ad genus Dictyothyrium neotericorum spectaret.

9. Microthyrium elatum Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 4751 of Sci. VIII (1913) p. 254. — Peritheciis in maculis nigris, primitus orbicularibus, 0,5 mm. latis, mox vario modo confluentibus in maculas ellipsoideas irregulares, usque ad 3 cm. longas, 1 cm. latas innatis, solitariis, rarius congregatis, globosis, 100 μ diam., epidermidem fusco-violaceo tinctam hemisphaerice elevantibus vel longitudinaliter plicantibus, poro minutissimo apertis, excipulo proprio carentibus; ascis clavatis, apice rotundatis, sessilibus, octosporis, aparaphysatis, 60 \* 15; sporidiis distichis, ovoideis, infra medium, rarissime medio septatis, haud constrictis, hyalinis, 15 \* 7-8.

Hab. in petiolis emortuis Coryphae elatae (Palmae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKEE) — Quond structuram videtur M. circinans Speg. valde proximum.

10. Microthyrium Scutiae Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4752 Buenos Aires XXIII (1912) p. 79. — Peritheciis saepius epiphyllis, sparsis, minutis, dimidiato-scutatis, 150-200 μ diam., margine repandulo sed integro, atris, glabris, rigidule membranaceis, contextu eximie radiante, centro subostiolatis; ascis obclavatis, apice subtruncatis, basi cuneato-rotundatis, 20-25 × 5-6, aparaphysatis; sporidiis subtristichis anguste clavulato-fusoideis, rectis vel vix inaequilateris, medio septatis, non vel vix. constrictis, minutis, hyalinis, 8 × 1,5.

Hab. in foliis vivis Scutiae buxifoliae (Rhamnaceae), in silvis prope Santa Cornelia, Jujuy, Argentina.

11. Microthyrium Mischocarpi Syd., Ann. Mycol. XV, 1917, p. 238. — 4753 Thyriothecia epiphylla, plura (3-10) in maculis minutis orbicularibus 1-2 mm. diam. viridulis collecta, orbicularia, dimidiata, atra, 140-170 μ diam., minute ostiolata, contextu radiato omnino opaco atro; asci clavati vel ventricosi; 36-48 × 14-16 breviter stipitati, octospori, aparaphysati; sporae distichae, breviter clavatae, superne late rotundatae, basim versus semper attenuatae, supra medium 1-septatae, non constrictae, hyalinae, 12-14 × 13-3,5.

Hab. in foliis Mischocarpi fuscescentis (Sapindaceae), Mt. Maquiling, Laguna, Ins. Philipp. (C. F. BAKER).

12. Microthyrium Alsodejae P. Henn., Hedw. v. 48. (1908) p. 109. — 4754
Peritheciis epiphyllis, sparse gregariis, dimidiato-scutatis, atris,

0,8-1 mm. diam., poro pertusis, contextu reticulato-celluloso, rufofusco, margine subhyalino radiato; ascis ovoideis vel subellipsoideis, tunicatis, octosporis, 70-80 × 45-60; sporidiis conglobatis, oblongis, curvatis, utrinque rotundatis, medio 1-septatis, intus granulatis, hyalinis, 50-60 × 8-12.

Hab. in foliis Alsodeiae sp. (Violaceae), Rio Cumina,? Parà (A. DUCKE).

AULOGRAPHELLA v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, 4755
 p. 354. — Est Lembosiea subiculo destituta. — Typ. gen. Aylographella Epilobii (Lib., ut Aulographum) v. Höhn., l. c.

PROTOTHYRIUM Arnaud, C. R. Ac. Sc. Paris, t. 164., 1917, p. 574. — 4756 Ann. École Nat. Agricult. Montpellier, t. 16., 1918, p. 100. — Stroma superficiale, crustaceum, applanatum, cum mycelio interno in tota superficie inferiori anastomosans; sporidia bilocularia. Caeterum ut in Trib. Protothyrie a e Arnaud, l. c. — Species typ. Pnot. Salvadorae (Cooke) Arn. (—Phyllachora (Dothidella) Salvadorae Cooke, Asterella confluens (Pat.) Sacc. etc.).

### Sect. 3. Phaeodidymæ

**SEYNESIA** Sacc. — Syll. II p. 668, IX p. 1064, XI p. 381, XIV p. 689, XVI p. 639, XVII p. 865, XXII p. 522.

1. Seynesia Alstoniae Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. 4757 Botany, VI (1914) p. 2227, Ascom. exsicc. 2164. — V. Höhnel, Ann. Mycol., 16., 1918, p. 221. — Peritheciis in epiphyllo haud maculato late sparsis, sessilibus, convexulis, minutissime papillulatis, interdum trigonis, 0,5-1 mm. diam., atris, glabris, dimidiato-scutatis, prosenchymatice-centrifuge contextis, ad marginem hyphis simplicibus, obtusis, discretis, septatis, fuscis, 5 μ latis, 50 μ usque longe excurrentibus, ad apicem demum ramose late apertis; ascis ovatis, crasse tunicatis, 50-70 × 30-40, octosporis, J +; paraphysibus ramosis 2 μ cr., flavido-mucosis; sporidiis ellipsoideo-clavatis, medio, interdum infra medium, septatis et valde constrictis, obscure fuscis, utraque cellula transverse hyalino-zonata, strato mucoso tenui obductis, 27-30 × 12-14.

Hab. in foliis Alstoniae macrophyllae (Apocynaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

2. Seynesia clavispora Rehm, Ascomyc. Philipp. in Philipp. Journ. of 4758 Sci. VIII (1913) p. 190. — Maculis hypophyllis, primitus orbicularibus, 4.8 mm. diam., demum confluentibus et late explanatis, nigris, ex hyphis centrifugis, rectis, septatis, vix ramosulis, 3.4 μ latis, hyphopodia non gerentibus, plus minusve dense contextis; peritheciis versus centrum maculae dispersis, dimidiatis, poro pertusis, centrifuge ex hyphis 4 μ cr. parallelis subfusce contextis, glabris, usque ad 200 μ diam., radiatim in hyphas mycelii abeuntibus; ascis permultis, ovato-clavatis, sessilibus, apice crasse tunicatis, 50.60 × 25.30, strato gelatinoso fuscidulo impositis obtectisque; sporidiis parallele positis, elongato-clavatis, apice superiore 5 μ cr. inferiore acutatis, medio septatis, non constrictis, hyalinis, demum brunneis, 35.40 μ longis.

Hab. in foliis Alyxiae moniliferae (Apocynaceae), Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (C. F. BAKER).

3. Seynesia Ipomoeae Syd., Enum. Philipp. Fungi II, in Philipp. Journ. 4759 of Sci. VIII (1913) p. 488. — Mycelio nullo; peritheciis epiphyllis, in maculas 0,5·1,5 cm. latas, circulares dense dispositis, atris, applanatis, pusillis, 55·100 μ diam., stellatim dehiscentibus et aetate plus minus late apertis, contextu radiato atro opaco ex hyphis crassiusculis composito; ascis ovato-globosis, 30·35 × 24 28, aparaphysatis, octosporis; sporidiis conglobatis, ellipsoideo-oblongis, medio 1-septatis et leniter constrictis, utrinque rotundatis, ex hyalino flavo-brunneolis, tandem fuscis, levibus, 15-17 × 7,5·8,5, cellula superiore saepe latiore.

Hab. in foliis vivis Ipomoeae obscurae (Convolvulaceae), Luzon, Manila, ins. Philipp. (MERRILL).

4. Seynesia orbiculata H. et P. Syd., Ann. Mycol. X, 1912, p. 39.— Pe- 4760 ritheciis epiphyllis, in greges omnino orbiculares 4-8 mm. latos densissime aggregatis, radiato-contextis, contextu opaco, plerumque rotundatis et 90-175 μ diam. vel etiam parum elongatis aut irregularibus tunc longioribus, subiculo nullo; ascis ovatis usque clavatis, apice incrassatis, 35-60 × 16-25, octosporis; sporidiis distichis v. conglobatis, ellipsoideis, utrinque rotundatis medio 1-septatis et constrictis, levibus, ex hyalino mox brunneis, 13-18 × 6-8.

Hab. in foliis Eucleae sp. (Ebenaceae), Letaba Drift Zoutpansberg, Transvaal, Africa austr. (E. M. Doidge).

Seynesia costaricensis Spegaz., Fungi Costaric. nonn., in Bol. Ac. 4761
 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 208. — Maculae nullae
 v. totum folium pallescenti-flavescens; subiculum nullum; thyrio-

thecia epiphylla, orbicularia, 90·120  $\mu$  diam., densissime constipata, inter se fere connata sed non confluentia, plagulas majusculas 4·8 mm. lat., orbiculares atras subcrustaceas matrici arcte adnatas efficientia, membrana basali destituta, ostiolo rotundo 20  $\mu$  cr. sed serius radiatim fissili perforata, margine integerrima ex hyphis radiantibus dense congestis creberrime septulatis (parenchyma simulantibus) efformata; asci subovati, mox diffluentes, 8-spori, 38-45 × 30; sporae ellipsoideo-subobovatae, laeves, 1-septatae, ad septum constrictulae, loculo infero quam supero conspicue minore, primo hyalinae serius fuligineae,  $20 \times 6\cdot7$ .

Hab. in foliis vivis Gaultherae odoratae (Ericaceae), in silvis Volcan de Poas, Costarica, America trop.

6. Seynesia Apuleiae Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue-4762 nos Aires XXIII (1912) p. 80. — Peritheciis gregariis, saepius hypophyllis, crustulas nigras irregulares 0,5-5 mm. latas efficientibus, hemisphaerico-scutiformibus, 90-150 μ diam., astomis, fragilibus, per aetatem stellatim dehiscentibus, nucleo carnosulo chlorino farctis; ascis obovatis, breviter crasseque pedicellatis, superne crasse tunicatis, 40-70 × 30-40; sporidiis ellipsoideis medio septatis, non vel vix constrictis, in juventute tunica mucosa, per aetatem evanescente, indutis, obscure fuligineis, 20-28 × 10-12.

Hab. in foliis vivis Apuleiae praecocis (Leguminosae), in silvis prope Puerto Leòn, Misiones, Argentina.

7. Seynesia ficina Sydow, Ann. Mycol. XIV, 1916, p. 365. — Peritheciis hypophyllis, dense gregariis, superficialibus, rotundatis vel saepe lobatis, 220-300 μ diam., atris, leniter carbonaceis, irregulariter dehiscentibus, contextu opaco radiato ex hyphis breviter articulatis 3-3,5 μ crassis composito; aseis varialibus, subglobosis, ovatis vel elongatis, 4-8-sporis, plerumque 45-55 × 35-40; sporidiis oblongis, utrinque rotundatis, medio vel circa medium septatis, non vel parum constrictis, levibus, ex hyalino fumoso-brunneis, 23-28 × 10-14; conidiis copiose praesentibus late piriformibus, circa basim 1-septatis, aterrimis, 17-22 × 13-16.

Hab. in foliis Fici notae (Moraceae), Los Baños ins. Philipp. (C. F. BAKER).

LEMBOSINA Theiss., Ann. Mycol. XI, 1913, p. 437; Theiss. et Syd., 4764 Ann. Mycol. XV, 1917, p. 417. — Est Lembosia mycelio destituta.— Typ. gen. Lemb. copromyia (B. R. S.) Theiss., et Lemb. aulographoides (B. R. S.) Theiss.

- MORENOINA Theiss., Ann. Myc. 11., 1913, p. 434.— Theiss. et Syd., Ann. Myc. 15., 1917, p. 417.— Est Morenoella mycelio superficiale destituta.— Typ. gen. est M. antarctica Speg.
- Morenoina inaequalis Maubl. et Arn., in Arnaud, Ann. Ecole Nat. 4765
   Agricult. Montpellier t. 16., 1918, p. 139, tab. XXII. Maublanc,
   Bull. Soc. Mycol. de F. t. 36., 1918, p. 40, fig. 10-11. Maculis
   epiphyllis, irregularibus, saepe confluentibus. Mycelio externo nullo.
   Peritheciis dense gregariis, ellipticis, lanceolatis vel elongatis, saepe
   confluentibus et trigonis vel irregularibus, usque ad 250 μ longis,
   80-100 latis, nigris, rima apertis, ex hyphis radiantibus, fuligineis,
   2,5-3 μ crassis compositis, ambitu non fimbriato. Ascis ovatis vel
   piriformibus, subsessilibus, apice late rotundatis et incrassatis,
   22-28 × 9-12, 8-sp., aparaphysatis. Sporidiis conglobatis, ellipticis
   v. subclavatis, pallide fuligineis, infra medium 1-septatis, loculo
   super. circ. duplo longiore quam infer., levibus, 8-10 × 3,5-4.

Hab. in foliis vivis Myrtaceae cujusdam, Corcovado p. Rio de Janeiro, Brasiliae (A. MAUBLANC).

# Sect. 4. Hyalophragmiae

- PHRAGMOTHYRIUM v. Höhnel, Fragm. z. Mykol. XVI, 1912, n. 725. Theiss. et Syd., Ann. Mycol. XV, 1917, p. 416. Est Microthyrium sporidiis hyalophragmiis donatum ? Typ. gen.: Phr. corruscans (Rehm, ut Micropeltis) Theiss.
- 1. Phragmothyrium fimbriatum v. Höhnel, Ann. Mycol., 17., 1919, p. 4766 115. Thyriotheciis subiculo destitutis, hypophyllis sparsis v. laxe gregariis, rotundatis, 220 μ latis, depressis, nigris, subpellucidis, obscure brunneis structura distincte radiata, margine plus minus fimbriatulo; ostiolis rotundatis 16 μ latis, margine 45 μ crasso limitatis; membrana basali tenui pallide brunnea radiata; paraphysibus nullis; ascis clavatis, infra inflatis, supra rotundatis et crasse tunicatis, sessilibus, 60 × 14; sporis distichis, hyalinis, elongatofusoideis, quadrilocularibus, circ. 16-20 × 4.

Hab. in foliis adhuc viridibus Ardisiae fuliginosae (Myrsinaceae), in sylva Tjibodas, Java (v. Höhnel). — Phragm. corruscanti (Rehm.) Th. proximum.

CAENOTHYRIUM Theiss. et Syd., Ann. Mycol. XV, 1917, p. 417. — 4767 Mycelium nullum. Thyriothecia superficialia, dimidiata, inversa, radiantia, membrana basali destituta, ostiolo setulis peristomalibus paucis praedito. Asci hymenium simplicem basalem polyascum efformantes. Paraphyses nullae. Sporidia hyalina, plurilocularia. — Typus gen. Caenothyrium alang-alang (Rac., ut Micropeltis) Th. et Syd., l. c. — Syn. Microthyrium Imperatae Syd. immaturum (cnfr. pag. 424).

## Sect. 5. Phaeophragmiae

SCUTELLUM Speg. — Syll. II p. 668, IX p. 1068, XVI p. 645, XXII p. 530.

1. Scutelium javanicum v. Höhn., Fragm. z. Myk. 726, Stzb. Ak. Wiss. 4768 Wien CXXI, 1, p. 348 (1912). — Peritheciis amphigenis, superficialibus, planis, atris, nitidulis, sparsis v. laxe gregariis, rotundatis, 250-350  $\mu$  diam., ostiolo nullo distincto sed in centro irregulariter apertis, membranaceis, subopacis, in centro minute cellulosis, pseudoparenchymaticis, ad marginem irregulariter sinuosum ex hyphis subparallelis 2  $\mu$  cr obscure brunneis compositis, margine non vel vix fimbriato; ascis octosporis, crasse clavatis superne rotundatis, inferne breviter attenuato-pedicellatis, 64-70  $\approx$  33-34, aparaphysatis; sporidiis polystichis, oblongo-clavatis. utrinque rotundatis, 4-locularibus, din hyalinis dein brunneis, ad septum medium parum constrictis, 30  $\approx$  12, loculo secundo superiore parum crassiore.

Hab. in foliis coriaceis Orchidaceae cujusdam, Tjibodas, Java.

PYCNOPELTIS Syd., Ann. Mycol. 14., 1916, p. 365.—Thallus superficialis consistens ex membranis simplicibus (strato cellularum unico) prosenchymatico radiantibus. Loculi (vel pycnothecia) monoascigeri, in ipso thallo formati, orbiculares. Asci aparaphysati. Sporidia phaeophragmia.

1. Pycnopeltis Bakeri Syd., l.c.—Membranis hypophyllis, primitus minutis orbicularibus, dein majoribus et saepe ad marginem lobatis, 150-220 μ diam., omnino superficialibus, atris, unistratosis, ex hyphis radiantibus plus minus pellucide brunneis creberrime septatis (articulis 4-7 μ longis, 3-4,5 μ latis) formatis; loculis seu pycnotheciis plerumque ad marginem thalli setis minutis ascum unicum tantum includentibus; ascis globosis vel ovato-globosis, aparaphysatis, brevissime stipitatis, 24-28 × 20-24, octosporis; sporidiis conglobatis, rectis vel leniter curvatis 2-vel saepius 3-septatis, diu hyalinis, tandem brunneis vel olivaceo-brunneis, utrinque rotundatis, hand con-

strictis, 15-18 × 4,5-6.

Hab. in foliis Ard is in a esp. (Myrsinaceae), Los Baños ins. Philipp. (C. F. Baker).

- KRIEGERIELLA v. Höhnel, Ann. Mycol. 16., 1918, p. 39. Subiculum praesens, exhyphopodiatum. Thyriothecia membranacea, acute conoidea, apice breviter cylindracea ostiolata. Paraphyses nullae. Asci pauci inflati, octospori. Sporidia cylindraceo-clavata, brunnea, pluriseptata.
- 1. Kriegeriella mirabilis v. Höhnel, l. c. Subiculum laxum ex hy- 4770 phis ramosis brunneis 2-3 μ cr. parce articulatis efformatum. Thyriotheciis sparsis v. seriatis, nigris magis altis quam latis apice rotundatis, 100-150 μ latis 100-160 μ altis, poro 30-35 μ lato apertis; membrana ex hyphis parallele radiantibus brunneis, 2-4 μ cr. tenuiter tunicatis efformato. Asci 2-3, octospori, basi vix pedicellati, supra breviter cylindraceo-rotundati, 60-80 × 32-40; sporidia cylindraceo-clavata recta apice utrinque rotundata, 30-35 × 9-10, sexlocularia, loculis terminalibus parum longioribus (7-9 μ).

Hab. ad acus putres Pini silvestris (Weiss föhre) (Coniferae), Königstein Saxonia, Germania (W. KRIEGER).

2. Kriegeriella transiens v. Höhnel, Ann. Mycol. 16., 1918, p. 40. — 4771 Subiculum laxe reticulatum ex hyphis sordide violaceis 2-2,5 μ cr. parce ramosis et articulatis rectiusculis constitutum. Thyriotheciis sparsis saepius seriatis conoideis, 120-240 μ latis 80-100 μ altis, membranaceis, sed membrana basali destitutis, poro terminali rotundato 20 μ diam.; membrana ex hyphis rectis parallele radiantibus connexis obscure brunneis, 2-4,5 μ cr. efformata; ascis 6-10, octosporis basi inflatis apice late rotundatis, 60-64 × 24-28; sporidiis plerumque 5-raro 4-locularibus, apice elongato-clavatis, utrinque rotundatis, 24-28 × 7-9, loculo terminali 8-10 μ longo caeteris 3-4 μ.

Hab. ad acus putres Pini uncinatae (Coniferae), Fichtelberge Saxonia, Germania (W. KRIEGER).

## Sect. 6. Hyalodictyae

STEPHANOTHECA Sydow, Philipp. Journ. of Sc. IX, 1914, p. 178.—
Theiss. et Syd., Ann. Mycol. XV, 1917, p. 417. — Mycelium distinctum nullum. Thyriothecia superficialia, radiantia, centro sterilia.
Asci singuli in plechtenchyma immersi et zona peripherica anulata efformantes, ovoidei, octospori, aparaphysati. Sporidia elongata,

hyalina, muralia. - Typus gen .:

1. Stephanotheca micromera Sydow, l. c. p. 179 fig. 8. — Peritheciis 4772 sparsis, sine maculis, omnino superficialibus, subiculo nullo, atris, 200-300 μ diam., ambitu orbicularibus, hand inversis, centro elevato praeditis, subtus quasi brevissime crasseque pedicellatis, irregulariter radiatim contextis, contextu ex hyphis brevissime parenchymatice septatis crasse tunicatis (articulis 2-3 μ longis et 2-2,5 μ latis) obscure fuscis marginem versus dilutioribus usque subhyalinis compositis; ascis ad marginem peritheciorum in strato diluto sitis, ovatis usque oblongis, sessilibus superne rotundatis 20-28 × 14-19, octosporis, aparaphysatis, quoque asco in loculo proprio sito; sporidiis 2-4-stichis, oblongo-clavulatis, apice late rotundatis basim versus attenuatis, 3-5-septatis non constrictis, cellula una alterave saepe semel verticaliter aut oblique septata, 11-16 × 4,5-5,5.

Hab. in foliis vivis Taxotrophis ilicifoliae (Moraceae), Palawan Lake Mariquao, Ins. Philipp. (MERRILL).

PYCNODERMA H. et P. Sydow, Ann. Mycol. XII, 1914, p. 563 (Etym. pycnos et derma) Trichopeltacearum.— Thallus superficialis, consistens ex membranis simplicibus (stratu cellularum unico) prosenchymatico-radiantibus orbicularibus confluentibus. Loculi (vel pycnothecia) monoascigeri, in ipso thallo formati, orbiculares. Asciaparaphysati. Sporidia muriformia, hyalina.

1. Pycnoderma bambusinum H. et P. Sydow, Ann. Mycol. XII, 1914, 4773 p. 563. - Membranis epiphyllis, primitus minutis orbicularibus, dein majoribus confluentibus et pelliculas forma irregulares saepe lobatas et plerumque elongatas 1 4 mm. longas ca. 1-2 mm. latas formantibus, omnino superficialibus, varii coloris (quoad maturitatem), primitus violaceo-brunneis, dein obscure brunneis, tandem subatris, sub microscopio pellucide brunneis vel ad marginem saepe pellucide flavidulo-brunneis, unistratosis, ex hyphis radiantibus creberrime septatis (articulis 6-10 µ longis et 5-7 µ latis) formatis; loculis seu pycnotheciis plerumque regulariter distributis, minutis ascum unicum tantum includentibus; ascis globosis vel ovato-globosis, aparaphysatis brevissime crasseque stipitatis, 24-27 \* 20-25, octosporis; sporidiis conglobatis, oblongo-ovatis, utrinque rotundatis, primitus horizontaliter 3-4-septatis in maturitate 4-5-septatis cum cellulis singulis vel omnibus semel longitudinaliter aut oblique septatis, ad septum medium subinde leniter constrictis, hyalinis, 16-18 \* 7-9, rectis vel leniter inaequilateris.

Hab. in foliis vivis v. languidis Bambusae vulgaris et Schizostachyi (Graminaceae), Antipolo pr. Rizal, Ins. Philippin. (M. RAMOS).

2. Pycnoderma circinans Syd., Ann. Mycol. XV, 1917, p. 236. — Thyriothecia epiphylla, maculis orbicularibus brunneolis 3-5 mm. latis insidentia vel eas circinatim ambientia, fere semper densiuscule et circinatim disposita, primitus minuta orbicularia 150-200 μ diam., tandem (saepe confluendo) majora irregularia et lobata, tunc usque 350 μ diam., brunnea centro ut videtur sterili subatro opaco, ambitu zonula angusta hyalina tandem evanescente cincta, contextu irregulariter minuteque celluloso; hymenia plura in quoque thyriothecio, per totum thyriothecium (centro opaco ut videtur excepto) dispersa, monoascigera; asci ovato-globosi, 20-28 × 18-22, octospori, aparaphysati; sporae conglobatae, oblongo-ellipsoideae, utrinque rotundatae, transverse 3-septatae, non vel vix constrictae, loculis 1-2 plerumque mediis septo singulo longitudinali divisis, hyalinae, 12-15 × 4,5-6.

Hab. in foliis B a m b u s a e sp. (Graminaceae), Catubig River, Samar, Ins. Philipp. (M. RAMOS).

3. Pycnoderma Villaresiae Syd., Ann. Mycol. XV, 1917, p. 147.— Mem- 4775 branis hypophyllis, sine maculis, in folii superficie plus minus dense distributis, atris, 150-220 μ diam., plerumque ambitu orbicularibus, subinde lobatis, haud raro confluentibus, omnino superficialibus sub microscopio fuligineo-brunneis, centro opacis atro-fuscis, unistratosis, ex hyphis radiantibus creberrime septatis (articulis 4-6 × 3-4) formatis; loculis plus minus regulariter circa centrum sterilem dispositis, 26-35 μ diam., ascum unicum v. paucos includentibus; ascis ovato-globosis, 22-28 × 18-22, octosporis, aparaphysatis; sporidiis clavulatis v. oblongis, utrinque rotundatis v. apice rotundatis, basique tenuatis, rectis v. leniter inaequilateris, hyalinis, 3-septatis, cellula una alterave semel longitudinaliter v. oblique septatis, non constrictis, 13-16 × 3,5-4,5.

Hab. in foliis Villaresiae Gongonhae var. integrifoliae (Icacinaceae), Palmeora Rio Grande do Sul, Brasiliae (ALFR. BORNMULLER).

### \*) Trib. 2. Asterinae (Sacc. et Syd.)

#### Conspectus analyticus ASTERINACEARUM

sensu Cl. Spegazzini, Rel. Myc. trop. (Bol. Ac. Nac. Cienc. Cordoba, t. XXIII, 1919, Extr. p. 136).

일하되는 하하다는 그는 이 이 얼마나 보다.	
1. Subiculum semper { plane nullum plus minusve late evolu	ntum 6
2. Thyriothecia costiolata perforata astoma, serius stellatim dehiscentia	
( hiscentia	
( semper hyalinae v vix el	ilo-
3. Sporae maturae semper hyalinae v vix cl rinae fuligineae	Microthyrium Desm. Seynesia Sacc.
( fuligineae	(1) SEYNESIOLA Speg.
4. Sporae maturae   fuligineae   semper hyalinae v. chlori	nae 5
5. Thyriothecia { glaberrima	(2) MICROTHYRIOLUM Speg. CHARTOTHYRIUM Speg.
, ( praeditum	
6. Subiculum hyphopodiis { praeditum omnino destitutum	10
rotunde ostiolato pe	보험하는 말이 말았다고라고 됐다
forata	[일본] [1] [1] [1] [1] [1] [1] [1] [1] [1] [1
7. Thyriothecia ab initio forata astoma, serius stell tim fissa	a- 9
semper hyalinae v. vix chle	• • • • • • • • • • • • • • • • • • •
8. Sporae maturae rinae	OPETHYRIUM Speg.
8. Sporae maturae   semper hyalinae v. vix chle rinae fuligineae	(3) OPEASTERINA Speg.
9. Sporae maturae } rinae	Hyalasterina Speg.
9. Sporae maturae semper hyalinae v. vix chl rinae fuligineae	Asterina Lév.
10. Thyriothecia ab initio   rotunde ostiolato-per forata astoma, serius stella tim dehiscentia	
10 Thursiothesis sh initia ) forata	
astoma, serius stella	
tim dehiscentia	
역용성 마시트 보면 전환 이번 경기를 가장하는 것이 되었다. 이번 경기 등을 되었다.	

<sup>\*)</sup> Genera sec. Theissen et Sydow, l. c., plerumque dubia, tunc removenda v. incertae sedis.

<sup>(1)</sup> Typ. gen. : S. chilensis (Speg.) Speg.

<sup>(2) » » :</sup> M. astomum (Speg.) Speg., M. circinans (Speg.).

<sup>(3) » \* :</sup> O. Aspidii (Heng.) Speg., O. Dyctiolomatis (Heng.) Speg., O. Elaeocarpi (Syd.) Speg., O. Holocalycis (Speg.) Speg.

11. Sporae maturae semper hyalinae v. vix chlorinae (1) CALOTHYRIOLUM Speg. (2) OPASTERINELLA Speg.

12. Sporae maturae semper hyalinae v. vix chlorinae calothyrium Theiss. ASTERINELLA Theiss.

### Sect. 1. Hyalosporae

- \*) ASTERULA Sacc. Syll. I p. 47, IX p. 375, XI p. 254, XIV p. 692, XVI p. 646, XXII p. 534.
- 1. Asterula Chamaecyparissi Shirai et Hara in Bot. Magaz. Tokyo XXV 4776 (1911) p 69, tab. 2 fig. 3-5. Mycelio epipnyllo, ex hyphis radiantibus, brunneis, 3 5  $\mu$  crassis, crebre septatis formato; peritheciis mycelio insidentibus, sparsis vel gregariis, scutiformibus, poro circulari minuto in centro elevatulo pertusis, obscure brunneis, membranaceis, radiato-contextis, margine levibus, 150-210  $\mu$  diam., cellulis quadratis vel triangularibus,  $5 \times 2-5$ ; ascis oblongis vel cylindraceis, apice rotundatis, basi breviter crasseque pedicellatis, rectis vel curvatis, aparaphysatis, octosporís,  $38-50 \times 10-12$ ; sporidiis distichis, ellipsoideis vel oblongis, continuis, intus granulosis vel non, hyalinis,  $13-15 \times 4-5$ .

Hab. in foliis vivis Chamaecyparis obtusae (Coniferae), Prov. Mino, Kawanye-mura, Japonia (K. HARA).

- CALOTHYRIELLA v. Höhnel, Ber. d. deutsch. bot. Ges. XXXV, 1917,
  p. 251. Est Calothyrium Th. sporis hyalinis continuis donatum.—
  Typus gen:
- Calothyriella pinophylla v. Höhn., Ann. Mycol. XV. 1917, p. 372.— 4777
   Peritheciis orbicularibus, brunneis, tenuibus, ostiolo rotundo 9-12 μ
   lato, plano, obsolete marginato apertis, 80-130 μ lat., 20 μ cr., regulariter radiatim contextis, cellulis marginalibus radiatim partitis
   et in fimbrias pallidiores mutatis; subiculo tenuissimo subhyalino
   membranaceo; ascis deorsum clavatis ad apicem tenuato-obtusis,

<sup>(1)</sup> Typ. gen.: C. coaguazuense (Speg.) Speg.

<sup>2) » » :</sup> O. brasiliensis (Speg.) Speg.

<sup>\*)</sup> Typ. gen. Ast. Epilobii Desm., sec. v. Höhnel in Theiss. et Sydow, Ann. Mycol. XV, 1917, p. 424, est Venturia, aliae, ad gen. Asterinam, ad Dothideaceas, etc. spectant.

36 44  $\times$  7-8, octosporis; sporidiis 2-3-stichis, liyalinis, oblongis, rectis, obtusatis interdum subfusoideis v. clavulatis, continuis, 3-5-guttulatis, 10-13  $\times$  2-2,8; paraphysibus filiformibus sursum ramulosis.

Hab. in acubus Pini austriacae (Coniferae), Sonntagsberg,
Austriae inf. (P. P. STRASSER).

## Sect. 2. Hyalodidymae

AULOGRAPHUM Lib. — Syll. II p. 727, IX p. 1101, XI p. 386; XIV p. 711, XVI p. 659, XVII p. 895 XXII p. 558.

1. Aulographum Ledi Peek in N. Y. State Mus. Bull. 150 [1910] p. 23 4778 (1911). — Maculis circularibus, griseo-albidis, margine brunneo vel purpureo-brunneo cinctis; peritheciis epiphyllis, paucis, ellipsoideis vel oblongis saepe confluentibus et substellatim lobatis, erumpentibus, atris; ascis obovatis vel subglobosis; sporidiis ovatis vel oblongis, continuis, demum uniseptatis, hyalinis, 12-15 × 6-8.

Hab. in foliis Ledi groenlandici (Ericaceae), Fine, St. Lawrence co. U.S.A. — Ob ascos subglobosos species facile dignoscenda.

2. Aulographum melaspileoides Rehm in Ber. Bayer. Bot. Gesellsch. XIII 4779 (1912) p. 103. — Ascomatibus minutissimis, sparsis, sessilibus, linearibus vel rotundatis, atris, nitentibus, rima angustissima apertis, circ. 100 > 50, contextu radiato, ex hyphis brunneis, septatis, parce ramosis, 20-30 > 6-8, composito; aseis ovoideis, octosporis, 40 > 12-14, paraphysibus ramosis tenuibus obvallatis; sporidiis polystichis, clavatis, utrinque rotundatis, medio septatis et ad septum paululo constrictis, utrinque 1-guttulatis, loculo inferiore interdum 2-guttulato, hyalinis, 10 > 5.

Hab. in caulibus emortuis Vaccinii Vitis Idaeae (Ericaceae), Stripsenjoch in Tirolia.

3. Aulographum Myrtaceae Theiss., Ann. Mycol. 16., 1918, p. 187. — 4780 Epiphyllum. Maculis nigris opacis, crustas circulares 3.6 mm. latas efformantibus; hyphis superficialibus, brunneis septatis ramosis 5 μ cr. tunica crassa praeditis; hyphopodiis variabilibus, e cylindraceis rectis usque incurvatis et sublobatis, 5 μ latis 8 μ altis, v. breviter capitatis et 5.6 μ diam.; peritheciis linearibus, rectis v. curvis, superficialibus 180-240 × 35-50 rimoso-apertis, radiantibus; ascis paraphysatis, ellipsoideis, breviter pedicellatis, 24-28 × 14-16, octosporis, crasse tunicatis; sporidiis hyalinis, bilocularibus, 8-10 μ long., loculo super. 3-4 μ cr. inf. 2-3 μ, fortiter incurvatis; para-

physibus indistinctis.

Hab. in foliis C am p o m an e s i a e sp. (Myrtaceae), S. Leopoldo, Rio Grande do Sul, Brasilia (THEISSEN).

4. Aulographum fimbriatum Sacc., Notae Myc. XXIII p. 68 (Acc. Venetotrent. 1917). — Peritheciis hinc inde dense irregulariter gregariis et maculas atras, varias formantibus, superficialibus, applanatis, oblongis, 200·300 × 50·60, rima latiuscula percursis; contextu ex cellulis angustis subparallelis, radiantibus formato, fuligineo, basi zona eximie fimbriata pallidiore marginato; ascis cylindraceis brevibus, 25·30 × 6,5·7,5, sessilibus, apice rotundatis, crasseque tunicatis, 4·8-sporis, filiformi-paraphysatis; sporidiis subdistichis oblongis, utrinque obtusulis, 7·8 × 2-3, hyalinis, lenissime constrictis.

Hab. in rhachidibus emortuis Demonoropis (Palmae), in M. Maquiling, ins. Philipp.— Affine A. Donacis Niesslet A. atromaculanti P. et S. sed peritheciis basi fimbriatis et non stellatim dispositis, ascis angustioribus etc. distinguitur.

- CAUDELLA Syd., Ann. Mycol., 14., 1916, p. 90 (Etym. cauda ob sporidia caudata). Mycelium superficiale, repens, septatum, ramosum, hyphopodiatum. Thyriothecia dimidiato-scutata, inversa, radiato-contexta vel melius ex hyphis maeandrice curvatis contexta, centro poro pertusa. Asci clavato-cylindracei, paraphysibus geminis nullis. Sporidia didyma, hyalina, basi longe caudata vel potius ciliata.
- 1. Caudella oligotricha Syd., l. c. Hypophylla, plagulas indefinitas 4782 mediocres vel majusculas plus minus effusas usque 2 cm. longas laxas formans; mycelio laxissimo et parco, ex hyphis rectis vel subrectis fuscis 3,5-5 µ crassis remote septatis saepe plus minus rectangulariter ramosis composito; hyphopodiis sparsis, alternantibus, continuis, sessilibus, globosis, subglobosis vel ovatis; rarius crasse cylindraceis, integris, obtusis, 7-11 µ longis, 6-9 µ latis; thyriotheciis laxe gregariis, orbicularibus, atris, 300-380 µ diam., centro poro rotundo 25.30 µ lato pertusis, lenticularibus, inversis, contextu fusco ex hyphis undulatis vel fere maeandrice curvatis ad marginem tenuibus 2-3 μ latis centrum versus magis regularibus crassioribus (3-4 μ) et distinctius septatis (articulis 4-6 μ longis) composito; ascis cylindraceo-clavatis, apice rotundatis et crasse tunicatis, basi breviter stipitatis, 85-105 \* 16-18, octosporis, in massa mucosa (ex paraphysibus mucose diffluentibus constante?) sitis: sporidiis oblique monostichis, vel distichis, subfusoideis vel augu ste cylindraceo-clavatis, supra medium septatis, non vel vix con-

strictis, hyalinis, apice rotundatis, deorsum sensim attenuatis, basi longissime angustissimeque caudatis v. potius ciliatis,  $25-34 \times 6-7$  (sine cilio), cilio hyalino recto v. curvato,  $25 \times 1$ .

Hab. in foliis Flacourtiaceae sp., Seringal S. Francisco, Rio Acre, Brasilia (E. ULE). — Sporidiis caudatis a ceteris Microthyriaceis bene distinctum genus.

- CALOTHYRIUM Theiss., Ann. Mycol. X, 1912, p. 160; Broteria 1914, p. 82. Theiss. et Syd., Ann. Mycol. XV, 1917, p. 418. Mycolium distinctum superficiale exhyphopodiatum. Thyriothecia radiata depressa centro ostiolata. Hymenium simplex, polyascum. Asci crasse cylindracci paraphysati quandoque distincte. Sporidia hyalodidyma. Typ. gen. C. nebulosum (Speg.) Th., C. pinastri (Fuck.) Th. etc.
- 1. Calothyrium jodascum Spegaz., Bel. Mycol. trop. etc. in Bol. Ac. 4783
  Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 139. Epiphyllum; maculae nullae; subiculum laxissime reticulato-araneosum, hyphis gracilibus 4-7 μ, fuligineis modice septulatis alterne ramosis, hyphopodiis plane destitutis sed conidiis alternariiformibus (40-45 μ long.) conspersis efformatum; thyriothecia reticulo subiculari insidentia, laxe gregaria, scutato-hemisphaerica, 100-150 μ, astoma, atra glabra laevia opaca, serius stellatim dehiscentia, margine denticulato-fimbriata, coriacella, contextu prosenchymatico-radiante rectiusculo gracili crebriuscule septulato donata; asci obovati superne obtuse rotundati breviter minuteque pedicellati, aparaphysati tunica leniter violascente vestiti, 8-spori; sporae obovato-ellipticae, utrinque rotundatae, parum supra medium 1-septatae, non v. vix constrictae, loculo supero breviore latioreque, e globoso ovato, infero subobeonoideo, leves, hyalinae, 20-30 × 15-16.

Hab. ad folia coriacea viva plantae ignotae, prope Apiahy, Brasilia (J. PUIGGARI).

2. Calothyrium leptosporum Theiss., Broteria, Bot., v. XII, 1914, fasc. 4784 I, p. 21. — Sori epiphylli orbiculares minuti 2-3 mm. lati; thyriothecia in singulis soris dense gregaria, superficialia, inversa, 100-150 μ diam., applanata, radiato-contexta ex hyphis flexuoso-undulatis fuscis angustis 2,5 μ cr., ambitu integro, centro parenchymatico demum rupto aperta. Mycelium laxum, ex hyphis angustis, flaccidis, griseo-fuscis, laxe ramosis septatisque, 2,5 μ cr. formatum; hyphae imprimis ad superficiem thyriothecii binis v. ternis parallele junctis faveolos latiusculos efformant, ad marginem

excurrentes. Asci breviter cylindracei, octospori, supra rotundati,  $55 \times 14$ , paraphysibus tenuibus flaccidis. Sporidiis distichis hyalinis,  $10-12 \times 3,5-4$ , cellula superiore paullum breviore et latiore, cellula infer. longiore cylindracea.

Hab. in foliis Solani sp., São Leopoldo, Brasilia. — Socia Asterina subreticulata Speg. et Phaeodimeriella guarapiensis (Speg.) Th.

3. Calothyrium subcolliculosum Spegaz., Rel. Mycol. trop. etc. in Bol. 4785 Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 140. — Epiphyllum; maculae nullae; subiculum submembranaceum plagulas orbiculares 5-10 mm. diam. atras, centro pallidiores, majusculas matrici arcte adnatas efficiens, hyphis gracilibus, clathrato-reticulatis fuligineis hyphopodiis destitutis efformatum; thyriothecia in plagulis subcircinatim circa centrum pallidius laxe gregaria, parva, 150-250 µ diam., scutato-depressa, astoma, stellatim dehiscentia, margine minute crenato-denticulata, contextu pellucido et perspicuo; asci elongato-obovati obtusissime rotundati, deorsum-subcuneati ac in pedicello brevissimo crassoque producti, tunica dilute violascente vestiti, dense crasseque pseudoparaphysati, 8-spori, 80-100 × 30-40; sporae obovato-clavulatae, medio 1-septato-constrictulae, loculo supero globoso v. subovato obtuso, infero obconico acutiusculo donatae, hyalinae, laeves, 30-32 × 15-16.

Hab. ad folia viva coriacea plantae ignotae (! Rubiaceae), prope Apiahy, Brasilia (J. PUIGGARI).

- LEMBOSIOPSIS Theiss., Ann. Mycol. XI, 1913, p. 435; Theiss. et Syd., 4786
  Ann. Mycol. XV, 1917, p. 422. Est Lembosia sporidiis hyalodidymis praedita. Typus gen. Lemb. Andromedae (Tracy et Earle)
  Theiss.
- \*) ASTERELLA Sacc. Syll. I p. 42, IX p. 393, XI p. 256, XIV p. 698, XVI p. 649, XVII p. 882, XXII p. 535.
- Asterella Puttemansii P. Henn., Hedw. vol. 48 (1908) p. 11. Ma- 4787 culis mycelii epiphyllis, rotundatis vel effusis, atro-crustaceis, hyphis repentibus, ramosis, fuscis, 4-5 μ crassis; peritheciis sparsis vel aggregatis, dimidiato-scutatis, radiato-cellulosis, atris, 140-200 μ diam.; ascis ovoideis, tunicatis, octosporis, 50-55 × 23-25; sporidiis subdistichis vel conglobatis, ellipsoideis, medio valde constrictis,

<sup>\*)</sup> Typ. gen.: A. megalospora B. et C., sec. THEISS. et SYD. l. c. sporidiis brunnels donata et tunc ad gen. Asterinam pertinet.

mox dehiscentibus, 20-22 \* 10-12, cellulis subglobosis, hyalinis, 10-12  $\mu$  diam.

Hab. in foliis Myrtaceae, Rio Grande, S. Paulo, Brasilia.
2. Asterella? fumaginea Dearn. et Barth., Mycologia IX, 1917 p. 349.— 4788
Peritheciis epiphyllis, gregariis v. folium fere totum subiculo fumagineo occupantibus; mycelio ex hyphis dichotomicis, anastomoticis brunneis septatis, 5-6 μ cr.; peritheciis globosis, setis 1-3 pungentibus, atro-brunneis, 100-400 \* 4-9, coronatis, rugulosis, atro-brunneis, 300-500 μ diam.; ascis sessilibus v. breviter ellipsoideis v. piriformibus, 45-60 \* 25-30, membrana 3 μ cr. praeditis, in quoque perithecio paucis, usque ad 10; sporidiis hyalinis clavato-oblongis, grumoso-nucleatis, 1-septatis, magnitudine variis, 15-25 \* 8-12, cellula sup. latiore.

Hab. in foliis vivis Panici ? latifolii (Graminaceae), Maricoa, Porto Rico (F. L. STEVENS). — Vix hajus loci.

CALOTHYRIOLUM Spegaz., Rel. Mycol. trop. etc., in Bol. Ac. Nac. Cienc. Cordoba t. 23., 1919, Extr. p. 137. — Caracteres ex tabula synoptica p. 435 relata.

1. Calothyriolum apiahynum Spegaz. l. c. Extr. p. 141. — Amphigenum; 4789 maculae nullae; subiculum plagulas orbiculares subparvas 2.5 mm. diam., atras efficiens ex hyphis laxissime intertextis rectiusculis remotiuscule septulatis alterne ramosis, 5.9 μ cr., nodulis hyphopodiisque omnino destitutis fuligineis efformatum; thyriothecia in centro plagularum subiculi pauci-gregaria, pusilla, 90-100 μ diam. astoma, serius late stellato-fissa, atra, glabra, laevia, opaca, contextu radiante rectiusculo crebre septulato, ambitu parce fimbriata; asci e globoso subobovati, antice obtusissime rotundati crassissimeque tunicati, postice brevissime crasseque pedicellati, aparaphysati, octospori, 40 × 35; sporae ellipsoideae v. vix subobovatae, medio 1-septato-constrictae, hyalinae, 20 × 9.

Hab. ad folia viva coriacea Lauraceae (7 Persea), prope Apiahy, Brasilia (J. Puiggari)

MICROTHYRIOLUM Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 136. — Caracteres ex tabula synoptica p. 435 relata.

Microthyriolum apiahynum Spegaz., Rel. Mycol. Trop. etc. in Bol. Ac. 4790
 Nac. Cordoba, t. 23., 1919, p. 135. — Epiphyllum; maculae orbiculares determinatae parvae, 1-2 mm., fuscescentes; thyriothecia pu-

silla 100-150  $\mu$  constipata in maculis saepius circinantia, astoma, serius centro stellatim debiscentia, coriacella, ambitu non fimbriata vix denticulata, atra, contextu aegre perspicuo radiante recto crebre transverse septato, subiculo omnino destituto; asci obovati antice obtusissime crasseque tunicati, postice subcuneati, brevissime crasseque pedicellati, pseudoparaphysibus paucis crassis concomitati, 8-spori,  $50 \approx 30$ ; sporae elliptico-obovatae v. subclavulatae, medio 1-septatae non v. vix constrictae, loculis subaequilongis, supero elliptico-ovato obtuso, infero obconico acutiuscule rotundato, hyalinae postremo chlorinae.

Hab. in foliis coriaceis vivis Lauraceae (? Persea), prope Apiahy, Brasilia (J. Puiggari).

2. Microthyriolum? oligosporum Spegaz., Rel. Myc. trop. etc. in Bol. 4791 Ac. Nac. Cienc. Cordoba t. 23.. 1919, Extr. p. 137. — Epiphyllum; maculae nullae; thyriothecia hinc inde dense gregaria (5-20), astoma 150-200 μ diam., serius stellatim dehiscentia, atra rugulosa glabra coriacella, contextu prosenchymatico-radiante non v. vix flexuosulo remote septulato, ambitu parce denticulato-fimbriata; asci e globoso obovati, antice obtusissime rotundati crassissimeque tunicati, postice subcuneati brevissime noduloseque pedicellati, tunica semper hyalina, aparaphysati, saepius tetraspori, 50-60 × 40; sporae conglobatae, cilindraceo-ellipticae, non v. vix subclavulatae, utrinque obtuse rotundatae, medio 1-septatae non v. vix constrictae, hyalinae, per aetatem leniter chlorinulae, 30 × 12-15.

Hab. in foliis vivis subcoriaceis ignotis (? Solanaceae), prope Apiahy, Brasilia (J. PUIGGARI).

## Sect. 3. Phaeosporae

\*) ASTERONIA Sacc. — Syll. 1 p. 47, XIV p. 693.

1. Asteronia Lauraceae P. Henn., Hedw. vol. 48 (1908) p. 11. — Maculis mycelii hypophyllis, gregariis, rotundatis, atro-crustaceis; peritheciis aggregatis, globulosis, cellulosis, 150-180 μ diam., ascis clavatis, apice rotundatis, octosporis, 30-35 × 4-6, paraphysatis; sporidiis subdistichis, oblongis, subfusoideis vel clavatis, obtusis, brunneo-fuscis, 6-10 × 2-3; hyphis repentibus, radiantibus, ramosis, fuscis, 2-3 μ crassis.

Hab. in foliis Lauraceae, Lontra, Rio Feio, S. Paulo, Brasilia.

<sup>\*)</sup> Typ. gen. A. erysiphoides K. et C. nec non A. appendiculosa (M. et B.) Mont., sec. Theiss. et Syd. 1. c. sunt fungi conidiferi.

### Sect. 4. Phaeodidymae

**ASTERINA** Lév. — Syll. I p. 39, IX p. 379, XI p. 255, XIV p. 693, XVI p. 646, XVII p. 875, XXII p. 537.

1. Asterina tertia Rac. ap. Theiss., Gattung Asterina (1913) p. 103.— 4793 Mycelio amphigeno indeterminato, atro, plagulas 1-3 mm. latas saepe confluentes efformante; hyphis obscure brunneis, 4 μ cr., septatis, cellulis elongatis, ramosis sed non valde intricatis; hyphopodiis sparsis, continuis, 3-4-lobatis, 8-13 μ latis, 5-8 μ altis; pyenidiis et peritheciis conformibus, conoideo applanatis, margine breviter nec semper fimbriatis, radiato-contextis, initio clausis dein centro laciniatim dehiscentibus; pyenidiis 55-80 μ latis, conidiis continuis, ovatis, levibus, brunneis, 17-20 × 12-15; peritheciis 120-160 μ diam.; ascis aparaphysatis, octosporis, 40-48 × 20-23; sporidiis didymis, brunneis, levibus, 16-20 × 8-10, ovoideis, medio leviter constrictis, utrinque rotundatis, loculo inferiore angustiore.

Hab. in foliis A c an t h a c e a r u m (A d h a t o d a, C r o s s a n d r a, etc.), Buitenzorg, Java. — Affinis A. Lawsoniae sed conidiis omnino brunneis, annulo aequatoriali hyalino carentibus. — Videtur mera forma A. divlocarvae.

2. Asterina melanomera Syd., Ann. Mycol. XV, 1917, p. 241. — Pla-4794 gulas plerumque epiphyllas 0,5-1,5 cm. latas irregulares formans; mycelium ex hyphis obscure brunneis rectangulariter ramosis 6-8 μ crassis septatis compositum; hyphopodia dispersa, solitaria continua crassa, obtusa, 11-14 μ alta, 10-11 μ lata, thyriothecia aequaliter densinsculeque disposita, orbicularia, convexa, 180-240 μ diam., radiatim contexta, ambitu fimbriata, contextu atro opaco; asci ovati vel ovato-globosi, 35-50 × 30-40, 4-8-spori, ut videtur aparaphysati; sporae ellipsoideae utrinque rotundatae, medio septatae et valde constrictae, leves, obscurae vel atro-brunneae, 25-30 × 12-14.

Hab. in foliis Dasymaschali clusiflori (Anonaceae), pr. Paete, Laguna, Ins. Philipp. (C. F. BAKER).

3. Asterina saginata Syd., Ann. Mycol. XV, 1917, p. 241. — Plagulas 4795 epiphyllas 4-8 cm. diam. atras formans; mycelium matrici adpressum ex hyphis longiusculis plus minus distincte et copiose rectangulariter ramosis radiantibus obscure castaneo-brunneis 8-10 μ latis septatis (articulis 18-25 μ longis) compositum; hyphopodia haud numerosa alternantia, raro opposita sessilia, ovata, integra, 13-16 μ longa 10-11 μ lata; thyriothecia laxe aggregata, orbicularia vel

suborbicularia, 200-300  $\mu$  diam., aterrima, opaca radiatim ex byphis crassis contexta, ad ambitum hyphis longis (usque 80  $\mu$ ) 7-10  $\mu$  latis copiose fimbriata, asci globosi vel subglobosi ca. 45 50  $\mu$  diam., aparaphysati; sporae ellipsoideo-oblongae, medio septatae et constrictae obscure brunneae, 27-30  $\approx$  12-14.

Hab. in foliis Polyalthiae spec. (Anonaceae), Bataan, Luzon, Ins. Philipp. (M. RAMOS).

4. Asterina porriginosa Syd. in Leaflets of Philipp. Bot. V (1912) p. 4796 1541. — Mycelio epiphyllo, plagulas minutas vel mediocres rotundatas subinde confluentes 1-5 mm. latas, atras, tenues efformante, ex hyphis fuscis ramosis 5-6 μ cr. composito; hyphopodiis alternatibus, sparsis, sessilibus, 1-cellularibus, cylindraceis vel subclavatis, apice rotundatis, 12-16 × 3,5-6; peritheciis rotundatis, radiatim contextis, stellatim dehiscentibus, 160-220 μ diam., contextu opaco, ambitu hyphis radiantibus 3-4 μ crassis cinctis; ascis ovatoglobosis, 40-54 × 30-45, octosporis; sporidiis ellipsoideis, utrinque rotundatis, medio 1-septatis et leniter constrictis, ex hyalino brunneis, verrucosis, 22-32 × 11-16, loculo superiore subinde paullo majore.

Hab. in foliis vetustis Ilicis cymosae (Aquifoliaceae), Puerto Princesa, Palawan, ins. Philipp.

5. Asterina malabarensis Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, 4797 p. 391. — Peritheciis hypophyllis, maculas irregulares 1 cm. longas efficientibus, irregularibus, mox rotundatis, mox autem elongatis v. forma irregulari, sublembosioideis, subinde confluentibus. 150-250 μ diam. v. usque 400 μ long., ambitu fibrillis radiantibus praeditis, contextu opaco, irregulariter dehiscentibus; mycelio parce v. modice evoluto, ramoso, ex hyphis obscure brunneis 4,5-6 μ diam. composito, hyphopodia pauca erecta usque 15 μ longa gerente; ascis ovatis v. ovato-clavatis, octosporis, apice leniter incrassatis, 45-58 ≈ 25-35; sporidis oblongis, utrinque rotundatis, medio 1-septatis et constrictis, levibus, primo hyalinis, mox brunneis, 22-26 ≈ 11-13.

Hab. in foliis Pothi scandentis (Araceae), Kanouth, Malabar, Indiae or. (E. J. BUTLER).

6. Asterina travaneorensis Sydow, Ann. Mycol. XIII, 1915, p. 38. — 4798 Epiphylla, plagulas minutas orbiculares 1-2 mm. diam. formans; mycelio ex hyphis rectis vel fere laxe ramosis septatis (articulis 20-30 μ longis) castaneo-brunneis 4-6 μ crassis composito; hyphopodiis modice numerosis, alternantibus, 12-18 μ longis, 8-11 μ latis, cellula superiore varie grosseque lobata vel incisa, inferiore brevi;

thyriotheciis crebre dispositis, rotundatis, 130-160  $\mu$  diam., stellatim dehiscentibus, ex hyphis rufo-vel castaneo-brunneis subrectis ambitum versus dichotome ramosis 3-4  $\mu$  crassis crebre septatis (articulis 4-8  $\mu$  longis) compositis, strato basali praeditis; ascis ovatoglobosis, aparaphysatis, 26-35  $\times$  22-28, octosporis; sporidis ellipsoideo-oblongis, minute verrucosis, utrinque rotundatis, ad septum modice constrictis, fuscis, 18-22  $\times$  9-11, loculis fere aequalibus vel superiore parum majore.

Hab. in foliis Marsdeniae sp. (Asclepiadaceae), Pulliyanur, Travancore, Indiae or. (E. J. Butler).

7. Asterina Nycticali H. S. Yates, Philipp. Journ. Sc. XII (1917) p. 4799 371 (A. Nycticaliae). — Maculis plerumque epiphyllis, orbicularibus vel irregularibus, atris, 3-5 mm. diam., mycelio ex hyphis paucis septatis obscure brunneis composito, ramis plerumque oppositis, anastomosantibus, 5-6 μ latis; hyphopodiis numerosis, plerumque alternantibus vel irregularibus, dichotomo-lobatis, 10-11 × 12-15, 1-cellularibus; peritheciis numerosis, rotundatis applanatis, minutis, 90-110 μ diam., obscure brunneis, subopacis, stellatim dehiscentibus; contextu radiante ex hyphis septatis 4-5 μ latis composito; ascis ovatis vel subglobosis, 26-28 × 18-20, octosporis, paraphysatis; sporidiis oblongis, utrinque rotundatis, medio 1-septatis, constrictis, brunneis, 1evibus, 15-18 × 7-8.

Hab. in foliis Nycticali cuspidati (Bignoniaceae), Basiad, Taybas, Luzon, Ins. Philipp.

8. Asterina fallaciosa Syd., Ann. Mycol. XV, 1917, p. 240. - Epi- 4800 phylla, plagulas primitus orbiculares vel suborbiculares 3-5 mm. diam. mox irregulares et plus minus confluentes tandem saepe effusas formans; mycelium rectangulariter ramosum, ex hyphis rectis obscure castaneo-brunneis 5,58 µ crassis laxiuscule ramosis compositum, hyphopodia haud numerosa solitaria vel saepe perfecte opposita, irregulariter cylindracea vel plerumque ampulluliformia. 12-17 μ longa, basi 9-10 μ lata continua; thyriothecia plerumque densiuscule disposita, rotundata vel elliptica aut oblonga, 220 320 u diam. vel usque 400 \u03c4 longa et 200 \u03c4 lata, ex hyphis radiantibus, rectis copiose septatis obscure castaneo-brunneis 4-5 μ crassis copiose septatis (articulis centralibus 4-5 > 6, peripheriam versus longioribus usque 16 μ) composita, ambitu hyphis similibus fimbriata: asci globoso-ovati, aparaphysati, 50-60 × 40-50, octospori; sporae ellipsoideo-oblongae, utrinque rotundatae, medio vel circa medium septatae et vix vel leniter constrictae, fuscae, leves, 32-36 \* 17-19.

Hab. in foliis Canarii sp. (Burseraceae), S. Antonio, Laguna, Ins. Philipp. (M. RAMOS). - Habitus fere Asterinellae obesae. sed hyphae hyphopodiatae.

9. Asterina Capparidis Syd. et Butl., Ann. Mycol. IX, 1911, p. 390. 4801 Mycelio plerumque epiphyllo, maculas rotundatas dein confluentes et crustas atras efficiente, ex hyphis repentibus intricato-ramosis anastomosantibus brunneis 3-4 µ cr. composito; hyphopodiis alternantibus, capitatis, superne sublobatis; peritheciis dense stipatis. lenticularibus, radiatim contextis, 90-120 µ diam., stellatim dehiscentibus; ascis ovoideis v. ovato-globosis, octosporis, 28-33 × 20-26; paraphysibus sparsis, septatis, ramosis; sporidiis conglobatis, ellipsoideis, utrinque rotundatis, primo hyalinis, dein brunneis, 1-septatis, loculo superiore majore, 16 19 × 8-10, episporio subtiliter granulato.

Hab, in foliis Capparidis sp. (Capparidaceae), Madras, Indiae Or. (E. J. BUTLER). - Ast. sphaerascae Thum. affinis sed ascis ovoideis octosporis diversa.

10. Asterina papillata Syd., Ann. Mycol. XIV, 1916, p. 92. — Amphi- 4802 gena, plagulas primitus minutas dein confluentes irregulares effusas griseolas formans; mycelio laxo ex hyphis fuscis 4.5,5 µ crassis remote septatis rectis composito; hyphopodiis hand numerosis alternantibus rectis vel subrectis, cylindraceis, 14-17 µ longis, 4-5,5 µ latis, cellula basali brevi, hand lobatis; thyriotheciis laxe gregariis, rotundatis 140.200 µ diam., stellatim dehiscentibus, demum late apertis, non vel parum fimbriatis, ex hyphis rectis obscure castaneo-brunneis subopacis crebre septatis (articulis 5-7 > 4-5) compositis, membrana basali praesente; ascis globosis usque ovatis. aparaphysatis, 38-48 \* 35-42, octosporis; sporidiis ellipsoideis, grosse verrucosis, opace brunneis, medio constrictis, 24-28 > 12-13.

Hab. in foliis Capparidis sp. (Capparidaceae), Seringal Auristella Rio Acre, Peruvia (E. ULE).

11. Asterina Caricarum Rehm — Syll.XIV p.695 — var. microspora Theiss., 4803 Gatt. Asterina (1913) p. 96. - A typo differt sporidiis minoribus, 17-22 × 8-11, hyphis plerumque rectis non undulatis. — Adsunt conidia (Asterostomellae) ellipsoidea, 13-19 \* 8, medio hyalino-cineta.

Hab. in foliis Caricae Papayae, C. sp. (Caricaceae) et Loasaceae cujusdam, in Brasilia, ex speciminibus Uleanis.

12. Asterina Jacaratiae Theiss., Ann. Mycol. XIV, 1916, p. 269. — Co- 4804 loniis epiphyllis, tenuibus, sparsis v. approximatis, suborbicularibus, 1-2 mm. latis; hyphis opposito-ramosis et pluries reticulato-con-

nexis, laete brunneis. 4  $\mu$  cr.; hyphopodiis oppositis v. rarius unifariis, 11-14  $\approx$  8-10, stipitatis, bicellularibus, cellula basilari cylindracea, apicali capitata; peritheciis 100-140  $\mu$  diam., plano convexulis, centro papillatis, demum stellatim apertis, contextu inverse radiato, ex fibrillis 3-3,5  $\mu$  cr., laete brunneis formato; ascis aparaphysatis, 45  $\approx$  32, octosporis; sporidiis bilocularibus, profunde constrictis, 17-20  $\approx$  9-10, brunneis, articulis subglobosis. Conidiis ovato-oblongis, brunneis, 18  $\approx$  8-9, zona aequatoriali pallidiori.

Hab. in foliis Jacaratiae dodecaphyllae (Caricaceae), in Brasilia merid. (ULE). — Affinis Asterinae Caricarum var. microsporae.

13. Asterina Lophopetali Rehm, Ascomyc. Philipp. V; Leaflets of Philipp. Botany, VI (1914) p. 2228. — Plagulis epiphyllis, nigritulis, discoidalibus, 0,5-1 cm. latis, sparsis; hyphis mycelii parce ramosis, 6 μ circ. latis, septatis, fuscis; hyphopodiis clavatis, rectis, interdum subcurvatis, fuscis, 2-cellularibus, 12-15 μ altis, cellula superiore 6-8 μ lata, inferiore 5-6 μ; peritheciis in mycelio sparsis, dimidiato-scutatis, primitus orbicularibus, mox linearibus, rectis, 300 μ longis, 100 μ latis, irregulariter ad apicem mox rimose apertis, fuscis, prosenchymatice centrifuge contextis, ad basim hyphis 4-6 μ cr. septatis longe excurrentibus ornatis; ascis ovoideis, aparaphysatis, J., 40-50 × 20 25; sporidiis oblongo-clavatis, medio vel paullulum superius septatis, subconstrictis, obscure fuscis, levibus, 25-30 × 11-15.

Hab. in foliis Lophopetali toxici (Celastraceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

14. Asterina brasiliana Spegaz., Rel. Myc. trop. etc. in Bol. Ac. Nac. 4806 Cienc. Cordoba, t. 23., 1919, Extr. p. 142. — Ita vocanda Ast. Combreti Syd. var. brasiliensis Thsz. quia secund. Cl. Spegazzini, minime varietas vero ut genuina species habenda.

15. Asterina escharoides Syd., Enum. Philipp. Fungi II, in Philipp. 4807 Journ. of Sci. VIII (1913) p. 489. — Epiphylla, maculas minutas 1-4 mm. latas efficiens; mycelio parco, ex hyphis anastómosantibus, remote septatis, fuscis, levibus, 3,5-5,5 μ crassis composito; hyphopodiis paucis, irregularibus, bicellularibus, cellula basali plerumque breviter cylindracea, superiore multo latiore, parum lobata et 8-10 μ lata, totis 12-18 μ longis; peritheciis aggregatis, rotundatis, 130-170 μ diam., stellatim dehiscentibus, contextu ex hyphis rectis fuscis 2,5-3 μ latis radiatim composito; ascis globosis vel subglobosis, aparaphysatis, 26-40 × 24-32, octosporis; sporidiis ob-

longis, utrinque rotundatis, medio 1-septatis et leniter constrictis. primitus hyalinis dein brunneis in maturitate minute verruculosis. 17-22 × 8-12.

Hab. in foliis vivis Quisqualis indicae (Combretaceae), Luzon. Manila, ins. Philipp. (MERRILL).

16. Actorina perpusilla Syd., Ann. Mycol., XIV 1916, p. 366. - Am- 4808 phigena, praecipue epiphylla, nudo oculo non vel vix conspicua; mycelio parcissimo, nudo oculo vel etiam sub lente valida non conspicno, solum sub microscopio visibili; laxissimo, ex hyphis paucis anastomosantibus olivaceo-brunneis leniter undulato flexuosis remote septatis 2-3,5 µ crassis formato; hyphopodiis paucis, hinc inde solitariis, sessilibus, continuis, valde lobatis, plerumque latioribus (6-8 u) quam altioribus (4 6 u); thyriotheciis sparsis, ambitu orbicularibus, 70-160 µ diam., e strato simplici hypharum 2-3 µ crassarum olivacearum vel olivaceo-brunnearum undulato-flexuosarum vix septatarum (vel saltem septis vix conspicuis) radiatim compositis, ad marginem saepe hyphis aequalibus plus minus longis fimbriatis, strato basali nullo, mox late apertis; ascis ovatis vel ovato-globosis, aparaphysatis, 25.30 × 20.22, 4.8-sporis; sporidiis oblongis, utrinque rotundatis, medio vel circa medium septatis et parum constrictis, ex hyalino brunneis, levitus, 18-20 × 9-11; conidiis in thyriotheciis similibus sed minoribus evolutis, continuis, late ovatis vel ovato-globosis, atro-brunneis, 18-22 × 12-16.

Hab. in foliis Alangii bezoniaefolii (Cornaceae), Los Baños, ins. Philipp. (C. F. BAKER).

17. Asterina simillima Syd., Ann. Mycol. XV, 1917, p. 242. - Epi- 4809 phylla, plagulas minutas 1-2 mm. latas tenues formans; mycelium laxum, tenuiter expansum, ex hyphis gracilibus flexuoso-undulatis 3-4,5 µ crassis flavo-brunneis parce septatis ramosis alternantibusque compositum; hyphopodia alterna, sessilia, continua, varie lobata, 5-10 μ longa et alta; thyriothecia minuta, dense gregaria, 80-115 μ diam., applanate stellatim dehiscentia, mox late aperta, strato singulo ex hyphis rectis opace olivaceo-brunneis vel atro-olivaceis, 2-3,5 \mu crassis (cellulis 4-7 \mu longis) contexto, ambitu copiose fimbriata, membrana basali nulla; asci ovato-globosi, aparaphysati, 25-30 \* 20-24, octospori; sporae oblongae, brunneae, utrinque rotundatae, medio septatae, vix vel leniter constrictae, leves, 14-17 ⋄ 6-7,5.

Hab. in foliis Luffae cylindricae (Cucurbitaceae), Rizal, Ins. Philipp. (M. RAMOS).

18. Asterina Momordicae H. S. Yates, The Philipp. Journ. of Sc., Bot., 4810 13., 1918, p. 374. — Epiphylla; maculas 2-4 mm. latas, atras efficiens; mycelio ex hyphis remote septatis fuscis 5-6 μ crassis composito; hyphopodiis numerosis, irregularibus, unicellularibus, 8-12 μ longis, lobatis; peritheciis rotundatis, 80-90 μ diam., stellatim dehiscentibus; contextu ex hyphis rectis brunneis radiatis, 2,5-3 μ latis composito; ascis subglobosis, 35-40 × 22-24, octosporis, paraphysatis; sporidiis oblongis, utrinque rotundatis, medio 1-septatis et constrictis, brunneis, laevibus, 19-21 × 9-11; cellula superiore latiore.

Hab. in foliis Momordicae sp. (Cucurbitaceae), Mount Binnang, Prov. Taybas, Luzon, Ins. Philipp. (Ramos et Edaño).

19. Asterina tropicalis Spegaz., Fungi Costaric. nonn. in Bol. Ac. Nac. 4811 Cienc. Cordoba, t. 23., 1919, Extr. p. 211. — Maculae nullae; subiculum atrum tenuissimum laxissime araneosum alterne v. opposite ramulosum, hyphopodiis pediformibus, 10 × 15, sessilibus alternis ornatum; thyriothecia laxe gregaria minuta rigidula, membrana basali destituta, astoma, centro radiatim rimosa, margine fimbriatula, atra, contextu fibroso-radiante parum distincto, 120-150 μ diam.; asci obovati, brevissime crasseque pedicellati, aparaphysati, S-spori, 45-50 × 35; sporae obovato-subcylindraceae, utrinque obtusae, medio 1-septatae non v. vix constrictae, loculis subaequilongis v. infero leniter breviore, fuligineae, laeves, 24 × 12.

Hab. in foliis vivis Reediae dulcis (Cyperaceae), in cultis S. Josè Costarica, America trop.

20. Asterina Dilleniae Syd., Philipp. Journ. of Sc., Bot., IX, 1914, 4812 p. 181. — Epiphylla, plagulas orbiculares 2-5 mm. latas atro-griseas formans; mycelio radiante, ex hyphis longiusculis ramosis obscure castaneo brunneis regularibus remote septatis crasse tunicatis 7-9 μ latis composito; hyphopodiis haud numerosis alternantibus vel unilateralibus, continuis, globulosis, truncatis vel breviter cylindraceis, castaneo-brunneis, rotundatis vel parum lobatis aut angulatis, 10-15 μ longis 9-11 μ latis; peritheciis sparsis, planis, inversis, rotundatis, 140-200 μ diam., stellatim dehiscentibus contextu subatro opaco ex hyphis 4-5 μ crassis composito; ascis globosis usque ovatis, paraphysatis, 40-60 × 35-45, octosporis, sporidiis conglobatis, oblongis, utrinque late rotundatis, medio 1-septatis et constrictis, ex haylino fuscis, verrucosis, 20-25 × 10-12.

Hab. in foliis Dillenia e sp. (Dillenia ceae), Palawan, Taytay, Ins Philipp. (MERRILL).

21. Asterina Ramosii H. S. Yates, The Philipp. Journ. of Sc., Bot. 13., 4813 1918, p. 375. — Hypophylla; maculas suborbiculares, atro-griseas, 4-10 mm. diam. efformans; mycelio effuso, laxo, ex hyphis brunneis septatis ramosis 4-5 μ crassis composito; hyphopodiis paucis, alternantibus vel irregularibus, cylindraceis, globosis vel lobatis, 6-8 μ longis, 5 μ latis; peritheciis numerosis, rotundatis, 80-120 μ diam., subopacis, stellatim dehiscentibus, radiatim contextis; ex hyphis 4-5 μ latis composito; ascis ovatis, 18-20 × 15-17, octosporis, paraphysatis; sporidiis conglobatis, oblongis, subinde late rotundatis, medio 1-septatis, ad septa-constrictis, laevibus, 14-16 × 6-8.

Hab. in foliis Dilleniae sp. (Dilleniaceae), Catubig River, Samar, Ins. Philipp. (RAMOS).

22. Asterina hians Syd., Ann. Mycol. XIV, 1916, p. 91. — Epiphylla; 4814 plagulas orbiculares 2-4 mm. diam. atras formans; mycelio radiante ex hyphis longis rectis vel subrectis remote septatis fuscidulis 5,5-7 μ latis ramosis composito; hyphopodiis alternantibus, continuis, sessilibus, ovatis vel crasse cylindraceis, obtusis, integris, modice numerosis, 12-15 μ longis, 7-8 μ latis; thyriotheciis gregariis, rotundatis vel ellipticis, 65-90 μ diam., mox latissime apertis ex hyphis opace viridulis vel griseo-viridulis rectis 4-5 μ latis (septis 7-12 μ distantibus) strato simplici radiato contextis, haud fimbriatis; ascis ovatis, 25-35 × 24-29, octosporis, aparaphysatis; sporidiis ellipsoideis, utrinque rotundatis, medio constrictis, ex hyalino opace viridulo-fuscis, levibus, 14-16 × 6-7.

Hab. in foliis Dioscoreae (?), Seringal, Auristella, Rio Acre, Peruvia (E. Ule).

23. Asterina Anisopterae H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4815 556. — Epiphylla, maculas parum definitas efformans; mycelio effuso, laxo, regulariter opposite ramoso, ex hyphis hinc inde anastomosantibus fuscis v. obscure fuscis 8-11 cr. (14-30 μ longis) nodos hemisphaerice prominulos 10-13 μ latos et altos gerentibus composito; thyriotheciis laxe gregariis, rotundatis, 200-300 μ diam. v. saepius ellipticis et tunc 250-500 μ longis 200-300 μ latis, leniter convexis, contextu ex hyphis fuscis v. subopacis rectis 6-8 μ crassis (articulis 10-12 μ longis) composito, ambitu hyphis brevibus radiantibus fimbriatis, sine membrana basilari; ascis aparaphysatis, ovatoglobosis, 60-70 × 45-55; sporidiis ellipsoideis, utrinque rotundatis, medio v. infra medium septatis et constrictis, sordide brunneolis, levibus, 32-38 × 18-22.

Hab. in foliis Anisopterae thuriferae (Dipterocarpa-

ceae), prov. Rhizal, Ins. Philippin. (M. RAMOS).

24. Asterina camarinensis H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4816 556. — Epiphylla, plagulas plus minus effusas 1-3 cm. (v. ultra) longas et latas formans; myce. ) ex hyphis undulatis ramosis valde anastomosantibus obscure brunneis subopacis 7-9 μ cr. (articulis 20-30 μ longis) haud hyphopodiatis sed nodos gerentibus composito; nodis pro ratione numerosis, plano-hemisphaericis, parum prominulis, 9-11 μ crassis; thyriotheciis dense dispositis, semper ambitu rotundatis v. fere rotundatis, 350-450 μ diam., laxe et plane convexis, opacis, ex hyphis rectis 4-5 μ crassis compositis, ambitu mox parum mox magis fimbriatis, membrana basali nulla; ascis ovato-globosis v. ovatis, octosporis, aparaphysatis, 65-80 × 40-60 sporidiis ovato-ellipsoideis v. ovato-oblongis, plerumque infra m dium septatis et parum constrictis, totis 38-43 × 20-26, loculo supero majore, infero parum minore et angustiore, dense minuteque verruculosis, brunneis.

Hab. in foliis Parashoreae plicatae (Dipterocarpaceae), Mt. Isarog, Camarines, Ins. Philippin. (M. RAMOS).

25. Asterina shoreana Sacc., Notae Myc. XXIII p. 61 (Accad. Ven. trent. 4817 1917). — Epiphylla, late sed remotiuscule gregaria, maculas nebulosas formans; peritheciis dimidiatis, ratione majusculis, 240 μ diam., vertice demum stellatim rimosis, nigricantibus; contextu radiato ambitu in zonam pallidiorem 20 μ latam fimbriatam decurrente; mycelio tenuissimo e filamentis 6-7 μ cr. fuscis e peritheciis radiantibus, repentibus; ascis globoso-ellipsoideis, sessilibus, 55-60 μ diam., octosporis, aparaphysatis; sporidiis conglobatis, constricto-didymis, loculo superiore crassiore et obtusiore, 30-40 × 16, diu hyalinis, dein flavidis, demum brunneis.

Hab. in foliis languidis v. cmortuis Parashore plicatae (Dipterocarpaceae), Los Baños, ins. Philipp. — Affinis Ast. inaequali Mont. sed asci et sporidia paullo minora. Probabiliter potius gen. Asterinellae adscribenda et a praecedenti non satis distincta.

26. Asterina japonica Theiss., Gatt. Asterina, p. 43, tab. VI fig. 22-23 4818 et VIII fig. 8, 13, 14 (1913). — Epiphylla; mycelio laxo, radiante; hyphis alterne ramosis, rectis, brunneis, 5 μ crassis; hyphopodiis alternis, continuis, hemisphaericis vel ovatis, obsolete lobatis, 5-8 × 8-12; peritheciis dense gregariis, orbicularibus, 140-200 μ diam. vel ellipticis usque ad 350 × 170, subcurvatis, poro centrali vel rima longitudinali dehiscentibus, ex hyphis 3-3,5 μ crassis, rectis,

brunneolis opace contextis, aetate ad marginem hyphis rectis in mycelium excurrentibus; ascis e globosis ovato-ellipsoideis, 45-68 × 25-30, octosporis, jodi ope lenissime coerulescentibus, paraphysibus mucose-indistinctis hyalinis obvallatis; sporidiis brunneis, 20-23 × 9-11, cellulis subinaequalibus utrinque rotundatis, constrictis.

Hab. in foliis Elaeagni pungentis (Elaeagnaceae), Tosa, Japonia.

27. Asterina Elaeocarpi Syd., Leafl. Philipp. Bot., IV, 1911, Art. 62., 4819 p. 1156. — Mycelio epiphyllo, maculas atras formante vel saepius totam folii superficiem irregulariter obtegente, atro, et hyphis dense breviterque ramosis 4-6 μ crassis hyphopodia alternantia 6-7 mero longa gerentibus composito; peritheciis dense sparsis, radiatim contextis, 100·180 μ diam., atris, centro perforatis; ascis ovatis, 42-60 × 28-35, octosporis; sporidiis conglobatis, ellipsoideis, utrinque rotundatis, medio 1-septatis et constrictis, et hyalino fuscis, 26-30 × 10-13.

Hab. in foliis Elaeocarpi pendulae (Elaeocarpaceae), Todaya, Ms. Apo, Distr. Davao, ins. Mindanao, in Philipp. (ELMER).

28. Asterina Breyniae Syd., Ann. Mycol. XV, 1917, p. 242. — Epiphylla, 4820 plagulas minutas 1-3 mm. latas formans; mycelium ex hyphis rectiusculis obscure brunneis septatis ramosis 5-7 μ latis compositum; hyphopodia modice copiosa bicellularia, 12-15 μ alta, cellula inferiore breviter cylindracea, superiore multo crassiore, 10-12 μ lata, valde profundeque lobata vel incisa; thyriothecia aggregata, orbicularia, 150-250 μ diam., contextu olivaceo-brunneo opaco ex hyphis rectis 3-4 μ crassis radiatim composito, stellatim dehiscentia, ambitu plus minus fimbriata; asci ovato-globosi, aparaphysati, 45-55 30-38, octospori; sporidia ellipsoideo-oblonga, medio septata et constricta, utrinque rotundata, in maturitate verrucosa, brunnea, 21-25 × 10-11.

Hab. in foliis Breyniae cernuae (Euphorbiaceae), Bontoc, Luzon, Ins. Philipp. (H. S. YATES).

29. Asterina breyniaecola A. Trotter n. nov., Ast. Breyniae H. S. Ya- 4821 tes, Philipp. Journ. Sc. Manila, XII (1917) p. 370, nec Sydow. -- Epiphylla, maculas orbiculares vel irregulares efformans, atras, 1-3 mm. diam., vel confluentes et plus minus totam folii superficiem obtegentes; mycelio ex hyphis ramosis anastomosantibus obscure brunneis septatis 4-5 μ crassis composito; hyphopodiis paucis, alternantibuvel irregularibus, rotundatis, lobatis, vel angulatis, 10-15 \* 7-8; peri-

theciis numerosis rotundatis, obscure brunneis, subopacis, 40-50  $\mu$  diam., irregulariter dehiscentibus, contextu ex hyphis radiatis 3-4  $\mu$  latis composito, mox pseudo-parenchymaticis; ascis ovatis 25-30  $\times$  15, octosporis, aparaphysatis; sporidiis elongatis, utrinque rotundatis, constrictis, fuscis, laevibus,  $12\cdot15\times4\cdot5$ , loculo superiore majore.

Hab. in foliis Breyniae acuminatae (Euphorbiaceae), Bontoc, Luzon, Ins. Philipp.

30. Asterina Crotonis Syd., Ann. Mycol. XIV, 1916, p. 91. — Hypo-4822 phylla, plagulas primo orbiculares dein plus minus confluentes et effusas irregulares tenues atro-griseas formans; mycelio haud copioso ex hyphis breviter ramosis copiose anastomosantibus fuscis 4,5-3 μ crassis septatis (articulis 15-20 μ longis) vix undulatis rectiusculis composito; hyphopodiis modice numerosis, alternantibus, continuis, sessilibus, plerumque modice lobatis, raro integris, 10-14 × 7-9; thyriotheciis laxe gregariis, orbicularibus, 150-200 μ diam., ex hyphis olivaceo-brunneis 5-6 μ crassis (articulis 9-11 μ longis) rectis contextis, ad ambitum non vel vix fimbriatis, demum late apertis; ascis ovato-globosis, aparaphysatis, 45-50 × 30-40, octosporis; sporidiis oblongis, levibus, fuscis, medio septatis et constrictis, 20-25 × 9-12.

Hab. in foliis Crotonis sp. (Euphorbiaceae), Roraima, Brasiliae (E. ULE).

31. Asterina Cassiae Syd., Enum. Philipp. Fungi I, in Philipp. Journ. 4823 of Sci. VIII (1913) p. 275. - Mycelio tenui, epiphyllo, maculiformi vel plus minusve effuso, atro, ex hyphis tenuibus, dilute fusois, dense ramosis, 3-4 µ cr., parce septatis (articulis longitudine variabilibus, mox 15-20 µ, mox multo longioribus) composito; hyphopodiis haud numerosis, plerumque alternis, rarissime oppositis, continuis, erectis, fuscis, saepe varie lobatis, 9-12 \* 4-5; peritheciis dense aggregatis, rotundatis, 100-140 µ diam., applanatis, stellatim dehiscentibus, tenuibus, contextu griseo-viridulo ex hyphis 2,5-3 µ crassis strato simplici radiato-contextis, peripherice subinde hyphis paucis flexuosis brevibus fimbriatis; ascis ovato-globosis, aparaphysatis, 26-34 × 22-28, octosporis; sporidiis oblongis, utrinque rotundatis, medio-septatis, non vel leniter constrictis, levibus, 16-20 ≥ 6.7, ex hyalino fuscis, loculis aequalibus; pycnidiis similibus copiose praesentibus, minoribus, 70-90 µ diam., conidiis continuis, semper angulatis, obscure olivaceo-fuscis, subopacis, 12 14 µ diam.

Hab. in foliis vivis Glochidionis llenosii (Euphor-

biaceae), non Cassiae timorensis, Luzon, Prov. Bataan, Limay, ins. Philipp. (P. W. GRAFF) - Cnfr. l. c. p. 490.

32. Asierina lobulifera Syd., Philipp. Journ. of Sc., Bot., IX, 1914, 4824 p. 181. - Epiphylla, plagulas tenuissimas irregulares primitus minutas dein plus minus confluentes griseo-atras formans; mycelio ex hyphis rectis vel rectiusculis fuscis ramosis septatis 4-6 µ crassis composito; hyphopodiis numerosis, alternantibus, totis 10-16 u longis, cellula basali plerumque brevissima vel usque ad 6 µ longa, cellula superiore grosse 2-4-lobata et 10-12 µ lata; peritheciis densiuscule dispositis, tenuibus, rotundatis, 100-140 µ diam., inversis, mox stellatim dehiscentibus, contextu ex hyphis obscure fuscis 3-3.5 u crassis rectis crebre sentatis (articulis 8-10 u longis) regulariter strato simplici composito; ascis globosis aparaphysatis 25-30 μ longis, 20-25 μ latis, octosporis; sporidiis conglobatis, oblongis, utrinque rotundatis, medio 1-septatis parum constrictis, levibus, ex hyalino fuscis, 16-18 \* 7-8,5; pycnidiosporis simul praesentibus continuis, fuscis, centro zonula hyalina cinctis, 15-18 × 8-10.

Hab. in foliis Glochidionis sp. (Euphorbiaceae), Palawan, Taytay, Ins. Philipp. (MERRILL). - Ast. lobatae Syd. proxima.

33. Asterina sphaeropoda Syd., Ann. Mycol. XV, 1917, p. 242. - E- 4825 piphylla, plagulas parum perspicuas primo orbiculares 3-5 mm. latas sed mox confluentes tunc multo majores effusas formans, tandem totam folii superficiem vel magnam ejus partem occupans; mycelium rectangulariter ramosum, ex hyphis rectis fuscis 7-8.5 µ crassis septatis (articulis 25-35 µ longis) formatum; hyphopodia copiosa, continua, globosa, subinde hemisphaerica, semper integra, 10-12 µ alta et lata; thyriothecia densiuscule dispersa, plana, 160-200 μ diam., e singulo strato hypharum 3-3,5 μ crassarum dilute brunnearum peripheriam versus torulosarum in centro subrectarum vel flexuosarum septatarum (articulis 10-12 μ longis) radiatim contexta, membrana basali nulla, stellatim dehiscentia; asci ovato-oblongi, aparaphysati, 50-60 × 30-35; sporae oblongae, medio septatae, vix vel leniter constrictae, brunneae, leves, 24-26 × 10-13.

Hab. in foliis Ostodis sp. (Euphorbiaceae), San Antonio Laguna, Ins. Philipp. (M. RAMOS).

34. Asterina cylindrophora Syd., Ann. Mycol. XV, 1917, p. 240. - Am. 4826 phigena. plerumque autem epiphylla, plagulas tenues arachnoideas primitus minutas mox confluendo majores et irregulares formans mycelium ex hyphis rectis rectangulariter alterne vel opposite ramosis firmis obscure brunneis 7-8 µ crassis septatis (articulis 20-

30  $\mu$  longis) compositum, hyphopodia plerumque exacte opposita, saepius cylindracea, integra,  $16.22~\mu$  longa,  $7.9~\mu$  lata, bicellularia, cellula inferiore minutissima, patentia; thyriothecia sparsa, rotundata  $160~250~\mu$  diam., plana non fimbriata, stellatim dehiscentia, e strato singulo hypharum rectarum  $2.3~\mu$  crassarum septatarum (articulis  $7.12~\mu$  longis) obscure castaneo-brunnearum contexta; asci aparaphysati, ovato-globosi, perfecte evoluti non visi; sporae oblongo-ellipsoideae, utrinque rotundatae, medio vel circa medium septatae et valde constrictae, verruculosae, castaneo-brunneae, 34.36~18.20, cellula inferiore plerumque minore.

Hab. in foliis Scolopiae sp. (Flacourtiaceae), Los Baños, Laguna Ins. Philipp. (C. F. BAKER).

35. Asterina escharoides Syd., Leafl. Philipp. Bot., IV, 1911, Art. 62, 4827 p. 1155. — Peritheciis amphigenis, irregulariter aggregatis, saepe in greges rotundatos 2-10 mm. latos dispositis, subinde etiam per magnam folii partem aequaliter vel irregulariter distributis, radiatim contextis, centro perforatis tenuibus, 100·175 μ diam., ambitu fibrillis 40·70 μ longis praeditis, atris, mycelio tenui parce evoluto, et hyphis 4-6 μ crassis ramosis septatis, hyphopodia minuta 6-9 μ longa gerentibus composito; ascis globosis vel subglobosis, 32-42 × 30·35, octosporis; sporidiis conglobatis, ellipsoideis, utrinque rotundatis, medio 1-septatis et constrictis, ex hyalino brunneis, verrucis lineatim dispositis distincte obsitis, 20·26 × 11-14.

Hab. in foliis Plateae apoensis (Icacinaceae), et Pittospori clementis (Pittosporaceae), Todaya, ins. Apo, Distr. Davao, ins. Mindanao in Philipp. (ELMER).

36. Asterina Litseae H. S. Yates, The Philipp. Journ. of Sc. Bot., 13., 4828 1918, p. 373. — Amphigena, plerumque epiphylla, plagulas irregulares, plus minus totum folium occupantes obtecta; mycelio effuso, laxo, ex hyphis obscure fuscis 3,5-4,5 μ latis anastomosantibus radiantibus formato; ramis irregularibus; hyphopodiis numerosis, unicellularibus, 7-8 μ longis, 3 5 μ latis, irregulariter dispositis; peritheciis numerosissimis, gregariis, rotundatis, 100-140 μ diam., stellatim dehiscentibus, convexis, contextu ex hyphis brunneis 2-3 μ latis, ambitu brevibus radiantibus fimbriatis praedito; ascis paraphysatis, ovoideo-globosis, 28-32 × 18-24, octosporis; sporidiis ellipsoideis, utrinque rotundatis, medio 1-septatis et constrictis, brunneis, laevibus, 15-17 × 8-9.

Hab. in foliis Litseae (Lauraceae), Burgos, Prov. Norte, Luzon; Ins. Philipp. (RAMOS).

37 Asterina Neolitseae H. S. Yates, The Philipp. Journ. of Sc. Bot., 4829 13., 1918, p. 374. — Epiphylla; plagulas suborbiculares, 4-10 mm. diam. vel confluentes, atras efformans; mycelio ex hyphis brunneis septatis 5-7 μ crassis longe articulatis (30 μ) anastomosantibus formato; hyphopodiis numerosis, alternantibus, bicellularibus; cellula superiore lobata, 15 μ lata; cellula inferiore 4-5 μ longa; peritheciis numerosis, rotundatis, 150-170 μ diam., applanatis, obscure brunneis, opacis; contextu ex hyphis 3-4 μ latis radiantibus composito, articulis 6-7 μ longis, ambitu fimbriatis; ascis ellipsoideis, octosporis, 60 × 25-30, aparaphysatis; sporidiis oblongis, ellipsoideis, utrinque rotundatis, constrictis, fuscis, verruculosis, 44-46 × 14-15.

Hab. in foliis Neolitseae (Lauraceae), Prov. Abra, Mount Posney, Luzon, Ins. Philipp. (RAMOS).

38. Asterina Verae-crucis Theiss. in Sacc., Ann. Mycol. XII, 1914, p. 4830 300. — Mycelio plagas irregulares epiphyllas, confluentes, opace nigras efformante; hyphis radiantibus, rectis, olivaceo-brunneis, opposite ramosis, 6.7 μ cr., septis plus minusve distantibus; hyphopodiis alternis, continuis, hemisphaericis, integerrimis, 13-15 μ diam. concoloribus; peritheciis inversis semiglobosis, vertice radiatim fisso, contextu ex hyphis olivaceo-brunneis, radiatis, 5-6 μ cr., rectis (cellulis circ. 10 μ longis) margine non fimbriato; ascis aparaphysatis, ovoideo-piriformibus, dein late ellipsoideis, 66 × 54, octosporis; sporidiis phaeodidymis, obscure brunneis, cellulis subaequilongis, ad septum constrictis, 30-35 × 15-17.

Hab. in foliis subvivis Laurineae cujusdam (! Litsaea), Veracruz, Mexico (S. Bonansea). — Socia adest Englerula mexicana Theiss.

39. Asterina trachycarpa Syd. in Leaflets of Philipp. Bot. V (1912) 4831 p. 1542. — Mycelio hypophyllo, plagulas irregulares effusas indeterminatas, 3 mm. ad 3 cm. latas, subinde totam folii superficiem obtegentes efficiente, fusco-brunneo, ex hyphis tenuibus dense intertextis 3-4,5 μ cr., dilute brunneis, hyphopodiis destitutis vel hyphopodia rudimentaria tantum quasi ramos breves gerentibus composito; peritheciis irregulariter sparsis, inaequalibus, vix discoideis, sed plerumque varie angulatis, 125-180 μ longis, irregulariter radiatim contextis, centro mox fatiscentibus; ascis ovato-globosis vel ovatis, 30-40 × 22-26, octosporis; sporidiis elliptico oblongis, utrinque rotundatis, infra medium 1-septatis et valde constrictis, ubique verrucosis, fusco-brunneis, 20-25 × 10-11, loculo superiore multo majore.

Hab. in foliis vetustis Derridis atro-violaceae (Leguminosae), Puerto Princesa, Palawan, ins. Philipp.

40. Asterina singaporensis Sydow, Ann. Mycol. 18., 1920, p. 159. — 4832 Epiphylla, plagulas tenues orbiculares 2-5 mm. diam. formans; mycelium laxum, ex hyphis rectis brunneis 3-4 μ crassis rectangulariter ramosis compositum; hyphopodia modice copiosa, hinc inde dispersa, raro opposita cylindracea vel subcylindracea, continua, integra, 10-15 μ longa, ca. 4-4,5 μ crassa; thyriothecia dense gregaria, regularia, semper orbicularia, 80-110 μ diam., ad ambitum fimbriata, regulariter ex hyphis fuscidulis semper rectis 3-4 μ crassis contexta; asci ovato-globosi, ut videtur aparaphysati, 8-spori, 30-40 × 20-24; sporae ellipsoideo-oblongae, medio vel circa medium 1-septatae, ex hyalino fuscae, 16-20 × 6-8, loculis leniter inaequalibus.

Hab. in foliis Derridis sinuatae (Leguminosae), Singapore, Straits Settlements, Asiae (C. F. BAKER).

41. Asterina Holocalycis Speg., Mycet. Argent. VI, Anal. Mus. Nac. 4833 Buenos Aires XXIII (1912) p. 81. — Plagulis saepius epiphyllis, discoideis, subcrustaceis, arcte aduatis, 0,5-2 mm. diam., nigris; subiculo parcissimo, hyphis flexuosis, alterne ramosis, fuligineis, laxe septulatis, 5-6 μ cr., hyphopodiis paucis, alternis, sessilibus, subglobosis, 12-15 μ diam., verruculosis; peritheciis centro plagularum dense constipatis, dimidiato-scutatis, 100-150 μ diam., contextu parenchymatico-sinuoso, radiante, fuligineo, ostiolo circulari obsoleto pertusis; ascis ellipsoideis, apice crasse tunicatis, basi cuneato-attenuatis, 50 × 25-30, filiformi-paraphysatis; sporidiis tristichis, cylindraceo-ellipsoideis, obtusis, ad septum non vel leniter constrictis, loculo infero nonnihil longiore, primo hyalinis dein fuligineis, 22-26 × 8-10.

Hab. ad folia viva Holocalycis Balansae (Leguminosae), in silvis prope Puerto Leon, Misiones, Argentina.

42. Asterina (Clypeolaster) loranthicola H. et P. Sydow, Ann. Mycol. XII, 4834 1914, p.266.—Amphigena, plagulas primitus rotundatas minutas 1-3 mm. diam. dein saepe confluentes formans; mycelio laxo, ex hyphis rectis vel fere rectis brunneis 4-6 μ crassis laxe irregulariterque ramosis composito; hyphopodiis haud numerosis, alternantibus. sessilibus, continuis, cylindrico-obovatis, saepe uncinatis, 9-11 μ altis, 5-6 μ latis, thyriotheciis dense aggregatis, semper orbicularibus, applanato hemisphaericis, 100-160 μ diam., contextu ex hyphis rectis crebre septatis 3,5-5 μ latis in articulos cubicos

v. parum elongatos (usque 7 μ longos) divisis composito, peripherice sat copiose fimbriatis, facile in sectores secedentibus; ascis aparaphysatis, ovato globosis, octosporis, 30-38 \* 24-30; sporidiis ellipsoideo-oblongis, medio septatis et constrictis, utrinque rotundatis, ex hyalino brunneis, 20.24 × 8-11, levibus, cellula superiore Saepe leniter latiore; thyriotheciis conidiiferis minoribus; conidiis elliptico-piriformibus, continuis v. medio spurie septatis, brunneis,  $15.22 \times 9.11$ .

Hab. in foliis Loranthi sp. (Loranthaceae), Quelimane, Africa or. lusitanica (J. B. EVANS). - Ast. consociatae, congestae, Büttneriae proxima sed differt praecipue hyphis mycelicis validioribus.

43. Asterina Phoradendri P. Henn., Hedw. v. 48 (1908) p. 12. - Ma-4835 culis mycelii amphigenis, rotundatis, atris, hyphis repentibus, atrofuscis, septatis, 3 µ circ. crassis; peritheciis sparsis vel aggregatis, dimidiato-scutatis, celluloso-radiatis; ascis ovoideis vel ellipsoideis, apice rotundato-tunicatis, 4-8-sporis, paraphysatis, 50-95 > 40.50; sporidiis ovoideis, medio septatis, constrictis, atris, 30.40 × 20-24.

Hab. in foliis Phoradendri lanceolato-elliptici (Loranthaceae), Morro Pellado, S. Paulo, Brasilia.

44. Asterina confertissima Syd., Ann. Mycol. XIV, 1916, p. 90. - E- 4836 piphylla, plagulas distincte orbiculares 1-3 mm. diam. non vel vix confluentes maculiformes atras formans; mycelio modice evoluto, laxo, radiante, ex hyphis fuscis irregulariter ramosis 5-6 µ crassis flexuoso-curvatis remote septatis (articulis usque 50 µ longis) composito; hyphopodiis modice numerosis, alternantibus, sessilibus, continuis, ovato-globosis, late conicis usque ovato-oblongis, 10-16 µ longis, 6.9 µ latis, integris, raro lenissime lobulatis; thyriotheciis densissime stipatis, rotundatis, 120-160 µ diam., irregulariter stellatim dehiscentibus, tandem latiuscule apertis, contextu opaco ex hyphis obscure olivaceis dense flexuosis vel fere submaeandrice curvatis usque ad centrum serratis vel dentatis, 3,5-4 µ crassis (articulis 10-12 µ longis) composito, ad ambitum hyphis similibus fimbriatis. Ascis aparaphysatis, ovatis vel ovato-oblongis, apice rotundatis, crasse tunicatis 35-50 × 18-26, octosporis; sporidiis ellipsoideo-oblongis, utrinque rotundatis, medio 1-septatis et parum vel leniter constrictis, levibus, fuscidulis, 17-20 × 8-10.

Hab. in foliis Arthrostemmatis campanularis (Melastomataceae), Serringal S. Francisco Rio Acre, Brasilia (E. ULE). 45. Asterina Astroniae H. S. Yates, Philipp. Journ. Sc. Manila, XII 4837

(1917) p. 370. — Epiphylla; plagulis suborbicularibus vel irregularibus, 4-8 mm. diam., saepe confluentibus, atris, mycelio ex hyphis paucis brunneis septatis anastomosantibus irregulariter ramosis 3-4  $\mu$  latis composito; hyphopodiis unicellularibus, paucis, irregulariter distributis, ovoideis, elongatis integris vel lobatis, 5-6  $\mu$  longis, 4-6  $\mu$  latis; peritheciis numerosis in quaque macula, suborbicularibus, applanatis, 160-200  $\mu$  diam., irregulariter dehiscentibus, contextu radiatim, ex hyphis obscure brunneis 2-4  $\mu$  diam. composito, ambitu vix fimbriato; ascis subglobosis vel ovoides, 45-55  $\approx$  28-35, octosporis, paraphysatis; sporidiis conglobatis, oblongis, utrinque rotundatis, ad medio 1-septatis, constrictis, fuscis, 18-28  $\approx$  10-12.

Hab. in foliis Astroniae sp. (Melastomataceae), Catubing River Samar, Ins. Philipp. (RAMOS).

46. Asterina transiens Theiss., Gatt. Asterina, p. 42, tab. VI fig. 29-30 4838 et VIII fig. 6 (1913). - Epiphylla; mycelio radiante soros minutos dense super folium sparsos sistente; hyphis rectis, opposite vel alterne ramosis, reticulatis, 3,5-5 µ crassis, late fusco-olivaceis; hyphopodiis alternis, cylindraceo conicis, integris, 6-10 \* 4 (rarius depressis, 4-5 × 5-8, subsinuatis); peritheciis paucis in centro mycelii aggregatis, 150-220 µ diam., orbicularibus vel ellipticis, usque ad 250-340 × 170-220 (rarius linearibus usque ad 450 × 120), stellatim vel rima lineari dehiscentibus, ex hyphis angustis, 3-4 μ crassis, brunneis opacissime contextis, margine fuscidulo subpellucido subcrenulatoque; ascis nunc ellipsoideis, 32-40 > 22 et sporidiis tristichis vel conglobatis, nunc oblongis, usque ad 50 × 18 et sporidiis distichis, jodi ope leniter coerulescentibus, saltem juventute, paraphysibus hyalinis flexuosis simplicibus obvallatis, octosporis; sporidiis 17-19 \* 6-8, utringue rotundatis, brunneis, constrictulis, cellula superiore plerumque globosa, inferiore cylindracea.

Hab. in foliis Miconiae Candolleanae (Melastomataceae), in Brasilia. — Ad Lembosiam vergens.

47. Asterina Miconiae Theiss., Ann. Mycol. XI, 1913, p. 440. — Mycelio dense reticulato, hyphis rectis, saepe torulosis, brunneis 3,5-4 μ cr., alterne ramosis; hyphopodiis alternis, continuis, breviter cylindraceis vel subglobosis, 6-7 × 5. Thyriothecia inversa, dimidiata, hemisphaerica stellatim dehiscentia, 150-200 μ diam., hyphis brunneis 4 μ crassis opace radiatim contexta, peripherice hyphis rectilineis torulosis densiuscule fimbriata, membrana basilari destituta. Asci paraphysati elliptico-clavati, 50 × 22-28, octospori. Sporae brun-

neae, 20.25 \* 9.11, utrinque rotundatae, cellulis subaequalibus.

Hab. in foliis Miconia e sp. (Melastomataceae), Sao Paulo, Brasiliae.

48. Asterina incisa Syd. in Syd. et Butler, Ann. Mycol. IX, 1911, 4840 p. 390. — Peritheciis epiphyllis, quoad formam variabilibus, rotundatis, ellipticis v. saepissime oblongis aut elongatis (Lembosiae ad instar) et tunc ut plurimum confluentibus, quasi profunde lobatis (lobis circ. 100-175  $\mu$  latis rima longa subhysterioidea v. irregulari dehiscentibus), atris, 300-500  $\mu$  longis, contextu opaco indistincte radiato, ambitu hyphis plus minus radiantibus ramosis anastomosantibus 4-7  $\mu$  cr., hyphopodia pauca gerentibus cinctis; ascis ovatis usque clavatis, apice valde incrassatis, 38-54  $\times$  26-30, paraphysatis, octosporis; sporidiis conglobatis, ellipsoideis v. oblongo-ellipsoideis, utrinque rotundatis, medio septatis et constrictis, ex hyalino brunneis, levibus, 17-20  $\times$  8-9.

Hab. in foliis Weberae corymbosae (Melastomataceae), Balehonnur, Mysore Indiae or. (E. J. BUTLER).

49. Asterina Maublancii (Arnaud) A. Maublanc, Bull. Soc. Mycol. de 4841 Fr. t. 36., 1920, p. 38, fig. 1-2, A. Melastomatis Lév. var. Maublancii Arnaud, Ann. Ecole nat. Agricult. Montpellier, t. 16., 1918, p. 169, fig. 21. — Maculis amphigenis (praecipue epiphyllis), sparsis, 2-5 mm. diam., rotundatis, nigris; hyphis repentibus, reticulatis, 7-8 μ crassis, septatis; hyphopodiis simplicibus, ovoideis vel piriformibus, sessilibus. Peritheciis orbicularibus, gregariis, saepissime confluentibus, elongatis vel trigonis, carbonaceis, nigris, pariete crassa, margine vix fimbriata. Ascis ovoideis, crasse tunicatis, paraphysatis, 8-sp., 65-82 × 38-48; sporidiis conglobatis, ellipticis vel fere piriformibus, medio 1-septatis constrictisque, loculis subaequalibus vel inferiore paulum angustiore, brunneis, 30-35 × 12-16.

Hab. in foliis vivis Melastomataceae cujusdam. Alto de Boe Vista, p. Rio-de-Janeiro, Brasiliae.

50. Asterina Cipadessae H. S. Yates, Philipp. Journ. Sc. Manila XII 4842 (1917) p. 371. — Epiphylla; maculis atris primo orbicularibus, 2-4 mm. diam., mox confluentibus et plus minusve totam superficiem folii obtegentibus; mycelio ex hyphis brunneis ramosis anastomosantibus 3-4 μ cr. composito, hyphopodiis numerosis, plerumque oppositis vel etiam alternantibus, irregulariter 2-4 lobatis, 7-10 μ longis; peritheciis numerosis, 150-250 diam., obscure brunneis subopacis vel opacis, rotundatis vel ellipsoideis, irregulariter dehiscentibus, contextu ex hyphis septatis radiatis 5-7 μ latis composito,

margine vix fimbriatis; ascis ovatis, 35-45 \* 22-27, octosporis, paraphysatis; sporidiis oblongis, utrinque rotundatis, ad medium 1 septatis, constrictis, obscure brunneis, papillatis, 28-32 \* 10-12.

Hab. in foliis Cipadessae (Meliaceae), Kolinge, Luzon Ins. Philipp.

51. Asterina opposita Syd. in Leaflets of Philipp. Bot. VI (1913), p. 4843 1926. — Epiphylla, maculas atras circulares 2-10 mm. latas efformans; mycelio ex hyphis dense intertextis, ramosis, septatis, 4,5-6,5 μ latis, atro-brunneis, opacis composito; hyphopodiis numerosissimis, plerumque perfecte oppositis, continuis, obtusis, opace fuscis, 10-14 × 4,5-6; peritheciis ambitu circularibus, 120-175 μ diam., contextu ex hyphis amoene radiantibus, 2-2,5 μ crassis, strato simplici composito, subpellucidis, fuscidulis; ascis globosis, subglobosis vel ovatis, 42-52 × 30-40, octosporis, aparaphysatis; sporidiis oblongis, utrinque rotundatis, medio 1-septatis et leniter constrictis, levibus, primo hyalinis dein brunneis, 24-28 × 12-14.

Hab. in foliis Meliaceae cujusdam, Cabadbaran, Mindanao, ins. Philipp. — A. Elmeri Syd. cognata sed notis variis distincta.

52. Asterina mandaquiensis P. Henn., Hedw. vol. 48 (1908) p. 12. — 4844 Maculis mycelii epiphyllis, effusis, atro-crustaceis; hyphis fuscis, ramosis, 2-3,5 μ crassis, conidiis fusoideis, medio 1-septatis, hyalino-fuscidulis, 10-18 × 2,5-3; peritheciis sparsis vel gregariis, dimidiato-scutatis, radiato-cellulosis, 200-250 μ diam.; ascis ovoideis, apice tunicatis, octosporis, 35 50 × 20-30; sporidiis ovoideis vel ellipsoideis, obtusis, medio septatis, paulo constrictis, atro-fuscis, 20-25 × 8-10.

Hab. in foliis Eugeniae uniflorae (Myrtaceae), Mandaqui, Serra Cantareira, S. Paulo, Brasiliae.

53. Asterina Eugeniae H. S. Yates, Philipp. Journ. Sc. XII (1912) p. 4845 371. — Hypophylla, maculas saepe marginales, usque 10 mm. diam., orbiculares vel irregulares; mycelio ex hyphis paucis effusis laxis septatis obscure brunneis ramosis anastomosantibus 4-6 μ crassis composito; hyphopodiis paucis alternantibus vel irregularibus, cylindraceis, rotundatis, 10-12 × 6; peritheciis numerosis, applanatis, atris opacis, 225-275 μ diam., centro perforatis, contextu ex hyphis radiantibus 3-5 μ latis composito; ascis oblongo-ovatis, paraphysatis, octosporis, 50 60 × 20-22; sporidiis oblongis, utrinque rotundatis, 1-septatis, ad septa constrictis, hyalis, 20 × 5 (immaturis), loculo superiore majore.

Hab. in foliis Eugeniae sp. (Myrtaceae), Botangas, Luzon,

Ins. Philipp. (RAMOS et DEROY).

54. Asterina ditissima Syd., Ann. Mycol. XV, 1917, p. 243. — Plerum- 4846 que epiphylla, primitus plagulas minutas orbiculares dein confluentes formans et tandem totam folii superficiem obtegens; mycelium ex hyphis rectangulariter ramosis septatis (articulis 15-25 μ longis 5-6,5 μ crassis) obscure castaneis compositum; hyphopodia copiosissima, alternantia, continua, subhemisphaerica vel brevissime crasseque cylindracea, 9-12 μ alta, 8-10 μ lata; thyriothecia dense disposita, orbicularia, 200-320 μ diam., convexula, radiatim ex hyphis rectiusculis ca. 3 μ crassis composita, contextu opaco; asci oblongi, 50-64 × 20-28, octospori, aparaphysati; sporae ellipsoideo-oblongae, medio vel paullo infra medium septatae, non vel vix constrictae, fuligineae, eves, 22-25 × 10-12.

Hab. in foliis Eugeniae sp. (Myrtaceae), Mt. Capoas, Palawan, Ins. Philipp. (E. D. MERRILL).

55. Asterina quarta Racib. ap. Theiss., Gatt. Asterina, p. 77, tab. I 4847 fig. 9, IV fig. 10 et V fig. 20 (1913). — Epi-rarius hypophylla; hyphis 5-8 μ crassis, castaneo-brunneis, cellulis 12-16 μ longis; hyphopodiis cylindricis, integris, btusis, rarissime breviter pedicellatis, 12-15 × 6-8; peritheciis 00-300 μ diam. ex hyphis 4 μ cr. opacissime contextis, peripherice hyphis valide crenulatis, laxe septatis fimbriatis, stellatim dehiscentibus; ascis aparaphysatis, ovatis, late tunicatis, octosporis, jodo coerulescentibus, 75-85 × 30 40; sporidiis brunneis, 20-22 × 11-14, laevibus, loculo supero latiore, infero angustato.

Hab. in foliis Syzygii jambolani (Myrtaceae), Buitenzorg, Java.

56. Asterina Rickii Theiss., Gatt. Asterina, p. 69, tab. IV fig. 5 et V 4848 fig. 17 a, 18 a (1913) — Seynesia † paraguayensis Theiss., Dec. Fung. Bras. 68. — Mycelio laxo, amphigeno, imprimis epiphyllo; hyphis gracilibus, 3,5-4,5 μ crassis, opposite, rarius alterne ramosis, rectis, fuligineo-brunneolis, laxe septatis (cellulis 24-28 μ longis); hyphopodiis anguste cylindraceo-conicis, unicellularibus, integris, rectis, alternis, 10-13 μ longis, basi 4,5-5,5 μ crassis; peritheciis primo discoideis, papillatis, dein conice elevatis, demum hemisphaericis, 100-150 μ diam., stellatim dehiscentibus, demum usque ad margi nem resolutis, laxe gregariis, ex hyphis brunneis, recto-radiantibus, 4,5-5 μ crassis (septis firmis, obscuris, 5,5-6,5 μ distantibus) contextis, peripherice hyphis griseis vix septatis tenuioribus 3 μ cr. leniter flexuoso-torulosis fimbriatis; ascis globosis 35-40 μ vel ovatis

 $38 \times 30$  vel ellipsoideis  $50 \times 32$ , aparaphysatis, jodo non coerulescentibus, octosporis; sporidiis conglobatis,  $18-22 \times 8-9$ , rotundatis, levibus, constrictis, brunneis, loculo supero parum latiore.

Hab. in foliis Myrtaceae cujusdam, Sao Leopoldo, Rio Grande do Sul, Brasilia. — Ab A. ampullulipeda et A. huallagensi hyphopodiis tenuioribus, conicis sporidiisque minoribus differt.

57. Asterina serrensis P. Henn., Hedw. vol. 48, 1908, p. 12. — Maculis 4849 mycelii epiphyllis, fuscidulis; hyphis fuscis, ramosis; peritheciis sparse gregariis, dimidiato-scutatis, radiato-cellulosis, 250-300  $\mu$  diam.; ascis clavatis, apice rotundatis crasseque tunicatis, octosporis, 80-110  $\times$  20; sporidiis conglobatis, ovoideis, rotundatis, medio septatis, constrictis, cellula superiore granulatis, atro-fuscis, 20-26  $\times$  8-10.

Hab. in foliis Myrtaceae, Alto da Serra, S. Paulo Brasilia.

58. Asterina oligocarpa H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4850 558. — Hypophylla plagulas effusas confluentes formans; mycelio laxo, ex hyphis rectis rectangulariter ramosis fuscis crebre septatis 6-7 μ crassis composito; hyphopodiis modice numerosis, cylindraceis, obtusis, rarius irregularibus, continuis, 8-14 μ longis, 6-8 μ latis, alternantibus; thyriotheciis dense gregariis, exiguis, rotundatis, 50-70 μ diam., fuligineis, ex hyphis 4-5 μ crassis crebre septatis (articulis 4-5 μ tantum longis) uno strato compositis, mox latissime apertis; ascis paucis (2-5) in quoque thyriothecio, ovatoglobosis, aparaphysatis, 40-45 μ longis, 30-35 μ latis, 4-8-sporis; sporidiis oblongo-ellipsoideis, utrinque obtusis, medio septatis et valde constrictis, verrucosis, in maturitate opace fuscis, 20-25 μ longis 10-11 μ latis, loculis fere aequalibus vel supero parum majore; thyriotheciis conidigeris similibus; conidiis piriformibus, continuis, opace fuscis, 22-24 μ longis, 15-18 μ latis.

Hab. in foliis Olacis imbricatae (Olacaceae), Angat pr. Bulacan, et prov. Rizal, Ins. Philippin. (M. RAMOS).

59. Asterina crebra H. Sydow, Ann. Mycol. XI, 1913, p. 327. — Maculas atras amphigenas primo orbiculares minutas 1.3 mm. latas tandem plus minus confluentes et per totam folii superficiem dispositas efformans; mycelio ex hyphis ramosis septatis (articulis 9.15 μ long.) fuscis 5,5.7 μ latis contexto, hyphopodiis continuis, breviter cylindraceis, regularibus, alternantibus, haud numerosis, 8.13 μ long., 4,5.6 μ latis, apice obtusis; peritheciis dimidiato-scutatis, amoene radiatim contextis, stellatim dehiscentibus, 90.125 μ

diam., ex hyphis strato simplici ordinatis ca. 4 µ latis fuscis contextis; ascis ovatis, aparaphysatis, 27-38 \* 20-30, octosporis; sporidiis ellipsoideis verrucosis, in maturitate brunneis, ad septum constrictis. 18-22 \* 7-9; pycnidiis numerosis simul praesentibus. 80-110 u diam.: sporulis continuis, ovatis, fuscis, 15-20 × 10-13.

Hab. in foliis Opiliae amentaceae Roxb. (Olacaceae), Bolampatty valley Coimbatore, Madras Pres. (C. E. C. FISCHER).

60. Asterina spissa Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, p. 4852 392. - Peritheciis epiphyllis, hinc inde maculiformiter aggregatis v. saepe per totum folium plus minus aeque distributis, radiatim contextis, 130-170 \( \mu\) diam., stellatim dehiscentibus, mycelio parco ex hyphis 4.5 µ cr. composito insidentibus, hyphopodiis ut videtur nallis, ascis ovatis v. ovato-globosis, octosporis, 38-45 × 30-35; sporidiis ellipsoideis v. ellipsoideo-oblongis, utrinque rotundatis, medio septatis et constrictis, brunneis, distincte verrucosis, 20-24 \* 9-12.

Hab. in foliis Jasmini sp. (Oleaceae), Chittagong, Indiae or. (E. J. BUTLER).

61. Asterina jasminicola H. S. Yates, The Philipp. Journ. of Sc., Bot. 4853 13., 1918, p. 373. - Peritheciis amphigenis hinc inde maculiformiter aggregatis vel saepe per totum folium plus minusve aeque distributis, maculis 2-6 mm. diam.; mycelio ex hyphis brunneis 4-5 µ diam. tortuosis composita; hyphopodiis numerosis bicellularibus, irregulariter distributis nunquam oppositis; cellula superiore irregulariter angulata et lobata, 8-10 µ diam., inferiore 5,5-6,5 × 4-4,5; peritheciis numerosis, globosis, atris, opacis, irregulariter dehiscentibus; ascis globosis, 22-26 µ diam., octosporis, paraphysatis; sporidiis medio 1-septatis, brunneis, verrucosis, ellipsoideo-oblongis, utringue rotundatis, 17-19 > 8-10.

Hab. in foliis Jasmini (Oleaceae), Burgos, Prov. Llocos Norte, Luzon, Ins. Philippin. (RAMOS).

62. Asterina Liparidis Rac. ap. Theiss., Gatt. Asterina (1913) p. 91, 4854 tab. VI fig. 37. - Amphigena; subjectlo plus minusve dense reticulato, hyphis irregulariter nunc laxe nunc dense ramosis, flexuosis, saepe fortiter undulatis, 4-5,5 µ cr. brunneis; hyphopodiis alternis, sessilibus vel erectis, semper tamen unicellularibus, varie lobatis, 7-10 µ longis et latis; peritheciis congregatis, applanatis, 150-220 μ diam. vel ellipsoideis 250 × 150, centro umbilicatis et irregulariter dehiscentibus, ex hyphis obscure brunneis 4 µ cr., rectis (cellulis 6-8 μ longis) opace contextis, non fimbriatis; ascis ovatis, aparaphysatis, jodo obsolete cyanescentibus, 4-8-sporis, 30-38 \*

25.30; sporidis (nondum plene maturis) 19-22 \* 8.10, utrinque rotundatis, fusco-brunneolis (episporio tenuiter verrucoso?), loculo supero plerumque latiore. — Conidis (Asterostomellae) late ovatis, 18-25 \* 13-16, atro-violaceis, medio hyalino-cinctis

Hab. in foliis Liparidis sp. (Orchidaceae), Gedeh. Java.

63. Asterina Bakeri Syd., Ann. Mycol. XIV, 1916, p. 367. — Epiphylla, 4855 primitus plagulas tenues orbiculares 0,5-1 cm. diam. formans, tandem plagulis plus minusve confluentibus, totam folii superficiem, vel magnam ejus partem plus minus aequaliter obtegens; mycelio ex hyphis longiusculis sat copiose rectangulariter vel fere rectangulariter et opposite ramosis 3-5 µ crassis fumoso-fuscis rectiusculis septatis (articulis 10-16 µ longis) composito; hyphopodiis propriis nullis, sed nodulis praesentibus; nodulis hypharum copiosis, plerumque leniter, elongatis, rarius subglobosis, 6-8 µ latis; thyriotheciis convexis, plerumque ambitu orbicularibus, 300-350 u diam... ex hyphis rectis fusco-brunneis 3-4 μ crassis septatis (articulis 8-10 μ marginem versus usque 15 µ longis) compositis, ad ambitum copiose fimbriatis, rima dehiscentibus; ascis ovatis, 50-70 \* 30-40 singulis elongatis, 8-sporis, J-; paraphysibus genuinis nullis; sporidiis ellipsoideo-oblongis, utrinque rotundatis, medio constrictis, ex hvalino fuscis, in maturitate dense distincteque verrucosis, 26.36 ≥ 12-14, loculis fere aequalibus vel superiore leniter majore.

Hab. in foliis Daemonoropis (Palmae), Los Baños ins. Philipp. (S. A. REYES).

64. Asterina transversalis Syd. in Leaflets of Philipp. Bot. V (1912) 4856 p. 1542. - Mycelio epiphyllo, effuso, tenui, maculas discoideas vel irregulares, magnas, 0,5-1,5 cm. latas, confluendo saepe majores efformante, ex hyphis longiusculis ramosis laxe intertextis, 5-7 μ cr., fuscis, saepe noduloso-incrassatis composito; nodulis hypharum plus minusve protuberantibus, utrinque v. rarius ad unum latus hypharum hemisphaerico-prominulis, vel etiam magis exertis, tunc irregulariter cylindraceis, usque ad 10 µ longis, 3-4 µ crassis, ex hyphopodia continua constituentibus; peritheciis in mycelio densiuscule aggregatis, sed sine ordine dispositis, mox in directione nervorum folii ordinatis, mox et saepius autem vario modo nervos transgredientibus, elongatis, angustis, minoribus 175-300 μ longis, majoribus fere usque ad 1 mm elongatis, radiatim contextis, rima longitudinali irregulariter dehiscentibus, quasi lembosioideis, atris, radiantibus 3-6 μ crassis cinctis; ascis ovato-globosis, 50-60 × 40-50, octosporis; sporidiis oblongis, utrinque rotundatis, medio 1-septatis, leniter constrictis, minute verruculosis, ex hyalino brunneis, 38-44 \* 16-20.

Hab. in foliis Palmae cujusdam scandentis, Puerto Princesa, Palawan, ins. Philipp. — Species pulchra, perdistincta.

65. Asterina perconferta Trott. n. nov., Aster. confertissima Spegaz., 4857 Fungi Costaric. nonn. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 210, cum icon., non Sydow 1916. — Hypophylla, rarius epiphylla; subiculum parcissimum, hyphopodiis bi-v.trilobis alternis (8 × 10-12) praeditum; thyriothecia confertissima (5-10) subconfluentia saepius plagulas latiusculas subcrustaceas efficientia, membrana hypoasca destituta, astoma, discoidea, 80-120 μ lat., centro stellatim dehiscentia, atra, glabra, subopaca, medio subparenchymatica, ambitu fibroso-radiantia, margine parcissime denticulato-fimbriata; asci obovati aparaphysati superne crasse tunicati inferne brevissime crasseque pedicellati, octospori, 38-40 × 25-30; sporae didymae ad septum constrictulae, cellula supera subglobosa (9 × 9) et infera fere obovata parum angustiore ac longiore, fuligineae laeves, 13-20 μ long.

Hab. in foliis vivis Passiflorae (Passifloraceae) ignotae, prope S. Josè Costarica, America trop.—Ab Ast. consociata Mut. et megalospora in Passifloras etiam vigentibus diversa.

66. Asterina piperina Syd., Ann. Mycol. XV, 1917, p. 243. — Epiphylla, 4858 plagulas minutas parum perspicuas formans; mycelium latum, ramosum, parce evolutum, ex hyphis flexuosis anastomosantibus remote septatis fusco-olivaceis 3-5 μ crassis compositum; hyphopodia dispersa, bicellularia, 7-12 μ longa, cellula basali minuta, stipitiformi, cellula superiore angulata leniter lobata vel recurvata, rarius integra, 6-10 μ lata; thyriothecia gregaria, rotundata, 120 150 μ diam., e strato simplici hypharum subrectarum 2;2,5 μ crassarum subrectarum olivaceo-fuscarum contexta; asci ovato-globosi, aparaphysati 26-35 × 20-26, octospori; sporidia oblonga, utrinque rotundata, medio septata leniter constricta, 16-19 × 8-9, leves, brunneae, conidia simul praesentia continua, ovoidea, medio zonula angusta hyalina cineta, 12-15 × 9-10.

Hab. in foliis Piperis sp. (aff. P. Betle) (Piperaceae), Kalinga Luzon, Ins. Philipp. (H. S. YATES).

67. Asterina Piperis H. S. Yates, The Philipp. Journ. of Sc. Bot., 13., 4859 1918, p. 374. — Mycelio epiphyllo, parce evoluto, tenue, laxo, effuso, ex hyphis brunneis 4 μ crassis formato; hyphopodiis alternantibus vel irregularibus, 2 cellularibus, cellula superiore irre-

gulariter lobata, 6-8  $\mu$  longa, 4-5  $\mu$  lata, cellula inferiore, 4-5  $\mu$  longa; peritheciis numerosis, applanatis, rotundatis, brunneis, stellatim dehiscentibus, 115-130  $\mu$  diam., contextu ex hyphis fuscis 2-3  $\mu$  crassis composito, ambitu parum fimbriato; ascis globosis vel subglobosis, aparaphysatis, 25  $\times$  20, octosporis; sporidiis conglobatis, oblongis, utrinque late rotundatis, medio 1-septatis et constrictis, fuscis, laevibus, 15-18  $\times$  7-8.

Hab. in foliis Piperis sp. (Piperaceae), Bangui, Prov. Llocos Norte, Luzon, Ins. Philipp. (RAMOS).

68 Asterina densa H: et P. Sydow, Ann. Mycol. XII, 1914, p. 557.— 4860 Hypophylla, plagulas effusas saepe confluentes 0,5·2 cm. (vel ultra) longas aterrimas formans; mycelio densissimo ex hyphis valde ramosis obscure brunneis 4-5,5 μ crassis composito; thyriotheciis dense dispositis, carbonaceis, rotundatis, usque ellipsoideis, 140-170 μ diam., ambitu non fimbriatis, radiatim ex hyphis obscure castaneo-brunneis subrectis v. leniter flexuosis 3-3,5 μ latis crebre septatis (articulis 6-9 μ longis) contextis; ascis ovato-globosis, 40-55 × 35·40, aparaphysatis, octosporis; sporidiis oblongo-ellipsoideis, utrinque rotundatis, constrictis, ex hyalino fuscis, levibus, 24-26 × 9·10, loculo supero subinde leniter majore.

Hab. in foliis Pittospori pentandri (Pittosporaceae), prope Angat, prov. Bulacan, Ins. Philippin. (M. RAMOS).

69. Asterina Zizyphiae H. S. Yates, The Philipp. Journ. of Sc., Bot., 4861 13., 1918, p. 375. — Amphigena; plagulas effusas, 2.5 mm. diam., saepe confluentes et totum folium plus minus occupantes efformans; mycelio ex hyphis brunneis anastomosantibus 6 μ crassis remote septatis (articulis 20-25 μ longis) ramosis composito; hyphopodiis irregularibus, unicellularibus, globosis, 10 μ diam.; peritheciis paucis, rotundatis, 120-170 μ diam., brunneis, ambitu non fimbriato, contextu radiatim ex hyphis brunneis leviter flexuosis 2-4 μ crassis composito; ascis octosporis, ovato-globosis, 40 ≈ 30, aparaphysatis; sporidiis (immaturis) oblongo-ellipsoideis, utrinque rotundatis, medio 1-septatis, constrictis, laevibus, hyalinis, 15 ≈ 10.

Hab in foliis Zizyphi (Rhamnaceae), Mount Tulaog Prov. Tayabas Luzon, Ins. Philipp. (Ramos et Edaño).

70. Asterina nodulifera Syd., Philipp. Journ. of Sc., Bot., IX, 1914, 4862 p. 180. — Amphigena, saepius epiphylla, plagulas minutas 2-4 mm. diam. opacas formans; mycelio radiante, ex hyphis rectiusculis opposito-vel alternatim ramosis obscure brunneis opacis 6-10 μ latis non hyphopodiatis sed regulariter globoso-nodulosis (nodos 10-15 μ

crassis) composito; peritheciis inversis, in centro plagularum laxe dispositis, rotundatis, 250-340 µ diam., plano-conoideis, tandem stellatim dehiscentibus, radiatim contextis, ex hyphis brunneis subrectis vel flexuosis 3-4 \mu crassis (articulis 10-14 \mu longis) compositis; ascis globulosis usque ovatis, 40-55 × 38-44, aparaphysatis; sporidiis octonis, oblongis, utrinque late rotundatis, ad septum non vel vix constrictis, totis 30-35 µ longis, levibus, ex hyalino brunneis, cellula superiore globosa 11-13 µ diam., inferiore cylindracea 20-24 × 10-12.

Hab. in foliis Angelesiae splendentis (Rosaceae). Palawan Taytay, Ins. Philipp. (MERRILL).

71. Asterina Canthii H. S. Yates, The Philipp. Journ. of Sc. 13., Bot., 4863 1918, p. 372. - Amphigena; maculas crustaceas, atras, irregulares. 5-6 mm. diam.; mycelio abundante, ad superficiem foliorum adpresso. ex hyphis anastomosantibus obscure brunneis 6-8 μ crassis formato; ramis oppositis vel alternantibus; hyphopodiis numerosissimis, oppositis, unicellularibus, oblongo-cylindraceis, apice rotundatis, 4-5 × 5; peritheciis rotundatis, atris, opacis, ambitu fimbriatis, 90-175 μ diam .: contextu subparenchymatico, irregulariter dehiscentibus : ascis oblongo-cylindraceis, 30-40 × 8-10, paraphysatis, octosporis; sporidiis medio 1-septatis et constrictis, brunneis, utrinque subacutis, 10-12 × 3-3,5.

Hab. in foliis Canthii (Rubiaceae), Burgos, Prov. Llocos Norte. Luzon, Ins. Philippin. (RAMOS).

72 Asterina platypoda Syd., Ann. Mycol. XV, 1917, p. 241. - Epiphylla, 4864 plagulas tenues orbiculares ca. 1 cm. latas dein confluentes et plus minus effusas formans; mycelium laxum, rectangulariter ramosum. ex hyphis obscure brunneis rectiusculis vel irregulariter flexuosis septatis (articulis longiusculis) compositum, hyphopodia semper solitaria, parce evoluta, continua; plerumque conoidea, lata basi sessilia; rarius crasse cylindracea, 18-20 µ alta, basi 12-14 µ lata, thyriothecia laxe gregaria, plana, orbicularia, 250-350 µ diam., ex uno strato hypharum rectarum dilute brunnearum 3,5-4 µ crassarum septatarum (articulis ca. 10 µ longis) composita, ad ambitum haud fimbriata; asci ovato-globosi, aparaphysati, 70-85 \* 55-70, octospori; sporae ellipsoideo oblongae, medio septatae, non vel vix constrictae, utrinque rotundatae dilute brunneae leves, 37.42 ¥ 18-21.

Hab. in foliis Urophylli banahaensis (Rubiaceae), Mt Maquiling, Laguna, Ins. Philipp. (C. F. BAKER).

73 Asterina Fagarae H. S. Yates, The Philipp. Journ of Sc., 13., Bot. 4865 1918, p. 373. — Epiphylla; plagulas orbiculares vel irregulares, 4.6 mm. diam., vel confluentes et superficiem foliorum obtegentes efformans; mycelio radiante, ex hyphis brunneis ramosis anastomosantibus 4.6 μ crassis composito; hyphopodiis numerosis, ramis simillimis, alternantibus vel irregularibus, 10.15 μ longis, 4.5 u latis; peritheciis opacis, rotundatis, applanatis, 170 220 μ diam., stellatim dehiscentibus; contextu ex hyphis radiantibus obscure-brunneis 5.7 μ ct. composito; ascis ovatis, 50.55 × 35.40, octosporis, paraphysatis; sporidiis conglobatis, oblongis, utrinque late rotundatis, medio 1-septatis et constrictis, brunneis, laevibus, 22.25 × 11.13.

Hab. in foliis Fagarae Avicennae (Rutaceae), Prov. Rizal, Luzon, Ins. Philipp. (RAMOS).

74. Asterina banguiensis H. S. Yates, The Philipp. Journ. of Sc. Bot., 4866 13., 1918, p. 372. — Epiphylla; plagulas plus minus effusas, 0,5-2 cm. longas et latas formans, vel orbiculares et 3-6 mm. diam., vel confluentes et magnam partem folii occupantes; mycelio ex hyphis ramosis valde anastomosantibus obscure brunneis 5-6,5 μ crassis composito; articulis 15-22 μ longis; hyphopodiis numerosis, cylindraceis 10-12 μ longis, 5 μ latis; peritheciis numerosis, dense dispositis, rotundatis, 120-160 μ diam., late et plane convexis, opacis contextu et hyphis 2-4,5 μ crassis composito, ambitu mox magis fimbriato; ascis ovatis, octosporis, aparaphysatis, 45-50 × 18-22; sporidiis ovato-oblongis, medio septatis et constrictis, utrinque rotundatis, brunneis, laevibus, 20-22 × 8-10.

Hab. in foliis Glycosmidis-(Rutaceae), Bangui Prov. Llocos Norte, Luzon, Ins. Philipp. (RAMOS).

75. Asterina Rhabdodendri Syd., Ann. Mycol. XIV, 1916, p. 92. — Hy- 4867 pophylla, plagulas parum perspicuas orbiculares vel confluendo irregulares 3-10 mm. diam. formans; mycelio ex hyphis rectis vel rectiusculis radiantibus fere rectangulariter ramosis obscure fusois 4-5,5 μ crassis, septatis (articulis 10-25 μ longis) composito; hyphopodiis numerosis, exacte oppositis, rarius singulis unilateralibus, rectis, cylindraceis, obtusis, integris, continuis, 9-12 \* 4-4,5; thyriotheciis sparsis vel laxe gregariis, orbicularibus, 130-200 μ diam., ambitu leniter fimbriatis, e strato simplici hypharum rectarum obscure fuscarum crebre septatarum (articulis 6-10 \* 3-3,5) radiatim compositis, membrana basali nulla; ascis ovato-globosis, paraphysatis, 35-45 \* 32-40, 4-8-sporis; sporidiis ellipsoideo-oblongis, medio 1-septatis et constrictis, facile in loculos secedentibus, fuscis, ver-

rucosis, 23-26 × 12-15.

Hab, in foliis Rhabdodendri crassipedis (Rutaceae), Manaos, Rio Negro, Brasilia (E. ULE).

76. Asterina decipiens Syd. in Leaflets of Philipp. Bot. V (1912) 'p. 4868 1540. - Peritheciis hypophyllis, plerumque per totam folii superficiem vel magnam ejus partem aequaliter denseque distributis, discoideis, 120-170 µ diam., atris, eximie radiatim contextis, stellatim dehiscentibus; mycelio haud copioso, ex hyphis flexuosis. densiuscule ramosis et intertextis, gracilibus, 3,5-4,5 µ cr. composito: hyphopodiis alternis, continuis, fuscis, late cylindraceis vel irregularibus, rectis vel curvatis, 7-9 × 3-4; ascis ovato-globosis, 15.25 > 12.18, octosporis; sporidiis elliptico-oblongis, medio vel circa medium 1-septatis, vix vel leniter constrictis, utrinque rotundatis, levibus, ex hyalino fuscis, 16-20 > 8-9; pycnidiis peritheciis similibus sed minoribus; sporulis late piriformibus, continuis, fuscis, 14-18 \* 9.10.

Hab. in foliis vetustis Champereiae Cumingianae (Santalaceae), Puerto Princesa, Palawan, ins. Philipp. - Habitu A. Elmeri Syd. similis sed hyphis, hyphopodiis et sporidiis alienis.

77. Asterina Elmeri Syd., Leafl. Philipp. Bot., IV, 1911, Art. 62, p. 4869 1156. - Peritheciis epiphyllis, densissime aggregatis et maculas orbiculares 2.10 mm. diam., confluendo saepe irregulares formantibus, 120-180 µ diam., radiatim contextis, centro perforatis, atris. opacis; mycelio et hyphis dense intertextis anastomosantibus obscure brunneis 6-8 µ latis, hyphopodia solitaria vel opposita continua, 9-11 µ longa et 4-5 µ lata, gerentibus composito; ascis globosis vel subglobosis, 40-50 \* 30-45, octosporis; sporidiis conglobatis, ellipsoideo-oblongis, utrinque rotundatis, medio 1-septatis et constrictis, ex hyalino brunneis, 25-30 \* 10-14.

Hab. in foliis Champereiae fragilis (Santalaceae), Magallanes Ms. Giting giting, Prov. Capiz, ins. Sibuyan, ins. Philipp. (ELMER).

78. Asterina opaca H. et P. Syd., Ann. Mycol. X, 1912, p. 38. — Epi- 4870 phylla, maculas atras orbiculares 1-3 mm. diam. efformans; hyphis brevibus, sed valde ramosis anastomosantibusque, castaneo-brunneis, 5.7 μ cr., densissime intertextis; hyphopodiis minutis, sessilibus, 1 cellularibus, castaneo-brunneis, apice rotundatis v. raro leniter attenuatis, alternantibus v. oppositis, 9 11 µ long. 5-6 µ latis; peritheciis saepe 1-2 tantum in quaque macula, in maculis majoribus usque 10 laxe dispositis, rotundatis, 150-250 μ diam., irre-

gulariter disrumpentibus, atris, contextu opaco, ambitu vix fimbriatis; ascis ovato-globosis v. ovatis, apice leniter incrassatis, aparaphysatis, 50-70 × 35-46, octosporis; sporidiis conglobatis, ellipsoideis, utrinque late rotundatis, medio septatis et valde constrictis, levibus, ex hyalino castaneo-brunneis, 26-28 × 13-14.

Hab. in foliis Chrysophylli natalensis (Sapotaceae), Amanzimtote Natal, Africae austr. (E. M. Doidge).

79. Asterina Chrysophylli P. Henn., Hedw. vol. 48 (1908) p. 12. — Ma- 4871 culis mycelii epiphyllis, effusis, atris; hyphis ramosis, atris, 4.7 μ crassis; peritheciis aggregatis, dimidiato-scutatis, radiato cellulosis, margine fimbriatis, 200-250 μ diam; ascis ovoideis, octosporis, 50-60 × 40-45; sporidiis ovoideis vel ellipsoideis, medio septatis, constrictis, conglobatis, atris, 25-30 × 12-14.

Hab. in foliis Chrysophylli sp. (Sapotaceae), Serra da Cantareira, S. Paulo, Brasilia.

80. Asterina diaphorella Sydow, Ann. Mycol; 17., 1919, p. 35. — Pe. 4872 raffinis A. laxiusculae, a qua differt hyphopodiis hemisphaericis 6-7 μ altis et latis et sporidiis minoribus, 26-30 \* 11-14.

Hab. in foliis Sideroxyli ferruginei (Sapotaceae), Santa Cruz Island, prov. Zamboanga, Mindanao, ins. Philippin. (E. D. MERRILL). — Sydow, Fungi exotici exsice. n. 269 sub A. laxiuscula Syd.

81. Asterina laxiuscula Syd., Enum. Philipp. Fungi I, in Philipp. Journ. 4873 of Sci. VIII (1912) p. 276. — Mycelio epiphyllo, parce vel modice evoluto, tenui, laxo, effuso, ex hyphis castaneo brunneis, 4.5 μ cr., ramosis, remote septatis formato; hyphopodiis alternantibus, continuis, obtusis, rectis, crasse cylindraceis, 6.10 × 4.6, castaneis; peritheciis mox laxe sparsis, mox magis aggregatis, applanatis, ro tundatis, extus stris, stellatim dehiscentibus, 150-220 μ diam., contextu opaco ex hyphis fuscis 3.4 μ cr. composito, ambitu parum vel modice fimbriatis; ascis ovatis, aparaphysatis, 55-75 × 40-50, octosporis; sporidiis conglobatis, oblongis, utrinque late rotundatis, medio septatis et constrictis, ex hyalino fuscis, levibus, 32.40 × 15-18.

Hab. in foliis vivis Sideroxyli angustifolii et S. ferruginei (Sapotaceae), Luzon et Mindanao, ins Philipp. (MERRILL).

82. Asterina Saccardoana Theiss., Gatt. Asterina, p. 45, tab. VI fig. 4874 31-32 (1913), A. correaecola Sacc. in herb., non Auct. — Hyphis micelialibus atro-brunneis, subtorulosis, irregulariter ramosis, 8-9 μ crassis, laxe septatis; hyphopodiis raris, versiformibus, cylindricis,

continuis, torulosis vel subsinuatis,  $10\text{-}16 \times 6\text{-}10$ ; peritheciis hemisphaericis, compactis, ex hyphis rectis, obscure brunneis,  $6\text{-}8~\mu$  cr. opace radiato contextis, peripherice non fimbriatis, e vertice stellatim dehiscentibus; ascis globosis vel ovatis, octosporis,  $80\text{-}100 \times 55\text{-}80$ , jodi ope coerulescentibus, fere sessilibus, paraphysibus sparse obvallantibus hyalinis, apice subcoloratis, basi ramosis, firmis,  $3\text{-}4~\mu$  crassis, septatis circumdatis; sporidiis maximis,  $46\text{-}54 \times 22\text{-}26$ , brunneis, utrinque rotundatis, ad septum constrictis, loculis vel aequalibus vel plerumque supero latiore et longiore,  $26\text{-}29 \times 23\text{-}26$ , inferiore  $22\text{-}25 \times 18\text{-}22$ .

Hab. in foliis Sideroxyli (Sapotaceae), in Australia.

83. Asterina lobata Syd. in Leaflets of Philipp. Bot. V (1912) p. 1541 4875 et VI (1913) p. 1927. — Mycelio hypophyllo, maculas atras tenues irregulares saepe confluentes et subinde magnam folii partem occupantes efformante, ex hyphis tenuibus, dense reticulatim intertextis, remote septatis, brunneis, 4-5 μ crassis composito; hyphopodiis alternantibus, irregulariter 2-4-lobatis, 5-9 μ altis, lobis ad apicem rotundatis, 3-3,5 μ latis; peritheciis densiuscule dispositis, minutissimis, rotundatis, 90-125 μ diam., tenuissimis, mox irregulariter dehiscentibus, contextu brunneo; ascis ovato-globosis, 25-35 × 20-25, octosporis; sporidiis oblongo-ellipsoideis, utrinque obtusis, medio 1-septatis, levibus, ex hyalino fuscis, 13-18 × 6-7; pycnidiis peritheciis similibus, sporulis late piriformibus, continuis, fuscis, 18-22 × 14-17.

Hab. in foliis vetustis Picrasmae philippinensis (Simarubaceae), Puerto Princesa, Palawan, ins. Philipp., nec non P. javanicae, Touaya, Mt. Apo, Mindanao, ins. Philipp.

84. Asterina diaphana Syd., Leafit. Philipp. Bot., IV, 1911, Art 62, 4876 p. 1155. — Peritheciis hypophyllis, superficialibus, in greges rotundatos vel irregulares 0,5-2 cm. latos laxe dispositis, 100-200 μ diam., radiatim contextis, planis, tenuissimis, atris, sub microscopio fuligineis et diaphanis, poro minuto centrali apertis; mycelio parce evoluto, radiante, et hyphis irregulariter ramosis 4-6 μ crassis, hyphopodia solitaria bicellularia elongato-ovoidea fusca 20-28 μ longa 10-14 μ lata gerentibus composito; ascis globosis vel subglobosis, 35-55 × 35-42, octosporis, aparaphysatis; sporidiis conglobatis, oblongo-ellipsoideis, utrinque rotundatis, 1 septatis, ad septum valde constrictis, facile in loculos secedentibus (loculis aequalibus vel subaequalibus), diu hyalinis, tandem fuscis, muco hyalino copiose obauctis, 21-28 × 12-15.

Hab. in foliis vivis S o l a n i m a n u c a l i n g (Solanaceae), Todaya, Ms. Apo, Distr. Davao, ins. Mindanao in Philipp. (ELMER).
85. Asterina Büttneriae Theiss., Gatt. Asterina (1913) p. 99, tab. II 4877 fig. 19 et 21, tab. IV fig. 15. — Plagulis tenuibus, nebulosis, indeterminatis, epiphyllis; hyphis subiculi 3-4 μ crassis, gracilibus, subflexuoso-undulatis, fusco-brunneis, opposite vel alterne ramosis; hyphopodiis alternis, flaccido-botuliformibus, 8-12 \* 4-5; peritheciis hemisphaericis, 140-170 μ diam., poro centrali primum, dein irregulariter stellatim dehiscentibus, basi brevissime flexuose fimbriatis, ex hyphis 5 μ cr. brunneis contextis; ascis ovatis vel ovatoellipsoideis, aparaphysatis, octosporis, 35 48 \* 30-35, jodo non coerulescentibus; sporidiis brunneis, 23-27 \* 9-11, oblongis, leniter constrictis, utrinque rotundatis, episporio verrucosulo, loculo supero paullo latiore.

Hab. in foliis Büttneriae australis (Sterculiaceae), Tubarao, Sancta Catharina et Sao Leopoldo, Rio Grande do Sul in Brasilia.

86. Asterina indica Syd. in Sydow et Butl., Ann. Mycol. IX, 1911, 4878 p. 390. — Maculis epiphyllis, rotundatis v. irregularibus, 0,3-1 cm. diam., brunneis; hyphis mycelii radiantibus, anastomosantibus, brunneis, 4-7 μ cr., hyphopodia alternantia applanato-globosa v. lobata 9-11 μ lata et 8 μ alta gerentibus; peritheciis paucis in quaque macula, radiatim contextis, 150-200 μ diam., irregulariter dehiscentibus, contextu opaco; ascis ovato-globosis, ovatis usque oblongis v. clavatis, apice valde incrassatis, 43-62 × 30-40, octosporis; sporidiis ellipsoideis, utrinque rotundatis, medio 1-septatis et valde constrictis, ex hyalino brunneis, levibus, 22-26 × 10-13.

Hab. in foliis Symploci sp. (Symplocaceae), Darjeeling, Indiae or. (W. Mc RAE).

87. Asterina grammocarpa H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4879 557. — Epiphylla, totum folium plus minus occupans; mycelio ex hyphis undulatis valde anastomosantibus flavo-brunneis 3,5-4,5 μ crassis composito; hyphopodiis alternantibus, bicellularibus, 11-16 \* 4-4,5, cellula basali recta v. subrecta, superiore leniter lobata et plerumque plus minus recurvata; thyriotheciis dense gregariis, rotundatis, 90-120 μ diam., brunneis usque obscure brunneis, ex hyphis rectis 3-5-4,5 μ latis crebre septatis (articulis 5-8 μ long.) strato simplici compositis, ambitu leniter fimbriatis, ascis globosis v. subglobosis, octosporis, aparaphysatis, rotundatis, medio 1-septatis et constrictis, brunneis, minute verruculosis (verrucis distincte

lineatim dispositis), 17-22 × 8-9.

Hab. in foliis Symplocaceae), Angat, prov. Bulacan, Ins. Philippin. (M. RAMOS).

88. Asterina Camelliae Syd. et Butl., Ann. Myc. IX, 1911, p. 389, t. XVII 4880 fig. 1-3.— Peritheciis epiphyllis, membranaceis, scutatis, ex hyphis radiantibus formatis, stellatim dehiscentibus, 200-300 µ diam., in crustas atras effusas usque 1 cm. latas superficiales dense aggregatis v. confluentibus; ascis paucis, elliptico-obovatis, octosporis (ut videtur), 70 100 × 25-35; sporidiis ellipsoideis, utrinque rotundatis, medio 1-septatis et constrictis, brunneis, 30-33 × 16.

Hab. in foliis Camelliae Theae (Theaceae), Dunmur Dullung, Sibsagar District, Assam, Indiae or. (G. WATT). — Socio adest (parasiticum?) Dimerium Wathii.

89 Asterina Pipturi Syd., Ann. Mycol. XIV, 1916, p. 366. — Mycelio 4881 epiphyllo, plagulas tenues griseo-atras orbiculares 2-5 mm. latas formante, ex hyphis rectiusculis vel parum flexuosis densiuscule et rectangulariter ramosis septatis 4 μ latis brunneis composito; hyphopodiis raris, dispersis, sessilibus, continuis, plerumque leniter lobulatis, mox latioribus, quam altioribus, mox e contra altioribus quam latioribus, 5-8 μ altis; thyriotheciis in medio macularum congregatis, orbicularibus, 80-100 μ diam., mox late apertis, e singulo strato hypharum olivaceo brunnearum 2,5-3 μ latarum sat crebre septatarum (articulis 5-6 μ longis) fere rectarum, composito, ambitu vix fimbriatis, membrana basali nulla; ascis aparaphysatis, subglobosis vel ovatis, 25-35 \* 22-30, octosporis; sporidiis ellipsoideis, utrinque rotundatis, medio leniter constrictis, verruculosis, fuscobrunneis, 18-20 \* 7-8, cellulis fere aequalibus.

Hab. in foliis Pipturi arborescentis (Urticaceae), Los Baños, ins. Philipp. (J. J. MIRASOL). — Art. Lawsoniae affinis.

90. Asterina pusilla Syd., Enum. Philipp. Fungi II, in Philipp. Journ. 4882 of Sci. VIII (1913) p. 488. — Epiphylla, maculas parum conspicuas, minutas vel confluendo majores et effusas formans; mycelio ex hyphis longiusculis, dilute fuscis, vix vel parce septatis, parum ramosis, 3,5-4,5 μ crassis composito; hyphopodiis continuis, alternis, fere semper 2-3-lobatis (lobis obtusis), usque ad 10 μ longis, saepe latioribus quam altioribus; peritheciis laxe gregariis, minutissimis, 70-80 μ diam., tenuissimis, radiatim strato simplici contextis, e centro ad marginem versus stellatim dehiscentibus, contextu ex hyphis 23 μ latis regulariter composito; ascis subglobosis, 20-26 × 17-20, octosporis, aparaphysatis; sporidiis 1-septatis et valde con-

strictis, levibus, fuscis, 16-20 > 7-8.

Hab. in foliis Premnae nauseosae (Verbenaceae) et P. sp., Luzon, Prov. Bataan, ins. Philipp. (GRAFF).

91. Asterina sphaerotheca Karst. et Roum. - Syll. IX p. 383 - var. pro- 4883 diga Theiss., Gatt. Asterina, p. 59, tab. II fig. 20, V fig. 14 et VIII fig. 9 (1913). - Subiculo flexuoso-crispo, hyphis irregulariter undulatis et reticulato-anastomosantibus, firmis, 5,5-6,5 u crassis: hyphopodiis oppositis vel etiam alternis, sessilibus, 8 \* 6, obsolete sinuato lobatis; peritheciis orbicularibus 110-180 u diam. vel ellipsoideis, 250 \* 140, colliculoso hemisphaericis, poro centrali vel lobis paucis radiatim dehiscentibus, vel rima lineari irregulariter ruptis, ex hyphis brunneis, subtorulosis vel rectis, 4-7 µ cr., firmis (cellulis 8-10 µ longis) contextis, peripherice aetate hyphis laete griseis flexuosis 3,5-4,5 μ cr. longius excarrentibus; ascis globosis vel ovatis, 50-65 \* 40-48, tunica crassa jodo lutescenti, octosporis, aparaphysatis, muco parco obvolutis; sporidiis brunneis, constrictis, utrinque rotundatis, 30-36 (interdum-40) \* 13-16, episporio tenuissime verruculoso, loculo supero plerumque parum latiore. - Conidiis (Asterostomellae) brunneolis, ovatis vel ellipsoideis, rectis vel subcurvulis, 18-25 \* 11-13, medio hyalino-cinctis continuis.

Hab. in foliis lianae cujusdam, Sao Leopoldo, Rio Grande do Sul. in Brasilia.

92. Asterina subinermis Syd. in Leaflets of Philipp. Bot. VI (1913) p. 4884 1927. — Mycelio hypophyllo, rārius et tunc parce etiam in epi. phyllo evoluto, late effuso, vix maculiformi, ex hyphis longiusculis, ramosis, fuscis, vix vel remote septatis, 4.5 μ crassis composito; hyphopodiis rarissimis, continuis, subglobosis, ovatis vel irregularibus et tunc saepe parum lobatis, alternis vel subinde etiam oppositis, fuscis, 9-10 × 6-8; peritheciis aggregatis, ambitu circularibus, 175 220 μ diam., stellatim dehiscentibus, amoene radiatim strato simplici contextis, contextu fusco ex hyphis 2-3 μ latis composito, ambitu hyphis flexuosis, radiantibus, 30-60 × 2,5-4 cinctis; ascis globosis vel subglobosis, octosporis, 42-55 × 35-45, aparaphysatis; sporidiis oblongis, medio 1-septatis, vix vel parum constrictis, utrinque late rotundatis, ex hyalino fuscis, verruculosis, 32-37 × 14-16, loculis aequalibus vel fere aequalibus.

Hab. in foliis vetustis fruticis cujusdam, Cabadbaran, Mindanao, ins. Philipp.

93. Asterina tayahensis H. S. Yates, Philipp. Journ. Sc. XII (1917) p. 4885 372. — Plagulis epiphyllis, atris, primo orbicularibus 3-4 mm. diam.,

Pyrenomycetæ, Microthyriaceæ, Halbanina.

luentibus et magnam partem folii obtegentibus; mycelio abunc hyphis brunneis septatis anastomosantibus ramosis irres 4-6  $\mu$  latis composito; hyphopodiis paucis dispersis, irredistributis, breviter cylindraceis, rotundatis, 10 12  $\mu$ -7  $\mu$  latis; peritheciis numerosis, globosis 130-200  $\mu$  diam., stellatim dehiscentibus, radiatim contextis ex hyphis 2-6  $\mu$ 3 subglobosis, octosporis, 25 \* 30, paraphysatis; sporidiis utrinque rotundatis, medio 1-septatis, constrictis, echinalongis, 10  $\mu$  latis.

i foliis plantae ignotae, Basiad, Tayabas Luzon, Ins. Philipp.

i distincta Berk. in Herb. Kew, in Theissen Ann. Mycol. 4886
p. 190. — Nomen nudum.

Arnaud, Ann. École Nat. Agricult. Montpellier, t. 16., 1918, 4887 ltym. a Cl. Marshall Ward). — Stromata ut in Asterina lio externo stigmocystis intercalaribus inflatis gerente. — enda est sec. Auct. Asterina (Asterula) myocoproides Sacc.

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ERTIA G. Arnaud, Ann. École Nat. Agricult. Montpellier, 4888 118, p. 165 (Etym. a Domin. Libert). — Tab XXXI. — Dimerosporii Fuck.; mycelio stigmopodiis destituto sed stis intercalaribus nodulosis donato. — Huc pertinet sec. sterina Couepiniae P. Henn. (= A. globulifera Pat.).

G. Arnaud, Ann. École Nat. Agricult. Montpellier t. 16., 63 (ad interim). (Etym. a gen. *Halbania* Rac. cui prox.).— ut in *Dimerosporio* Fuck.; a gen. *Halbania* sporidiis unisc triseptatis differt.

irregularis (Syd.) G. Arnaud, l. c., Asterina irr. Syd. in Lea- 4889 ilipp. Bot. V (1912) p. 1540. — Mycelio hypophyllo, eximie praecipue ad marginem, plagulas atras discoidales vel ir- 0,5-1 cm. longas efformante, tenui, ex hyphis dense ratomosantibusque, obscure brunneis, septatis, 5-6  $\mu$  crassis hyphopodiis paucis alternantibus,  $10\text{-}14 \times 6\text{-}8$ ; peritheciis itis rotundatis vel saepius elongatis, subinde etiam tribosioideis, 200-300  $\mu$  diam. vel usque ad 750  $\mu$  elongatis, sta quasi hysterioidea dehiscentibus, ambitu hyphis ratinctis, contextu obscure brunneo opaco; ascis ovato-glo- 5  $\star$  50-65, octosporis; sporidiis ellipsoideis, utrinque late

rotundatis, medio septatis et valde constrictis, ubique verrucosis, ex hyalino brunneis, 32-36 × 15-16.

Hab. in foliis vetustis Vaticae obtusifoliae (Dipterocarpaceae), Puerto Princesa, Palawan, ins. Philipp.

- BALANSINA G. Arnaud, Ann. École Nat. Agricult. Montpellier, t. 16., 1918, p. 123. - Stroma ascigerum centrale stellatum, cum mycelio interno pluribus locis connexum; mycelium externum, ex hyphis ramosis stigmatocystis distinctis destitutis; asci ovoidei, oblongi, erecti, contextu paraphysoideo circumdati; sporidia bilocularia, brunnea.
- 1. Balansina stellata G. Arnaud, l. c. p. 124, tab. XII. Maculis 1-2,5 4890 mm. latis, stromatibus paucis unilocularibus 0,5-1 mm. long.; ascis ovoideis oblongis, ventricosis, octosporis; sporidiis bilocularibus, brunneis, 20-20,5 > 9-10, loculis longitudine subaequalibus, superiore tantum latiore. Mycelio externo brunneo ramoso, interno subcuticulari, hyalino

Hab. in foliis Myrsineae cujusdam, Caaguazu, America austr. (J. B. BALANSA).

TRICHASTERINA G. Arnaud, Ann. École Nat. Agricult. Montpellier, t. 16., 1918, p. 172 (Etym. e mycelio setuloso). - Est Asterina mycelio setuloso praedita.

1. Trichasterina Styracis (Th.) G. Arnaud. l. c., Asterina Styracis Theiss., 4891 Gatt. Asterina, p. 41 tab. III fig. 6 et VII fig. 26-27 (1913). — A. silvatica Theiss. Dec. Fung. bras. 77, non Speg.; A. silvatica Rehm in Rick, Fungi austro-amer. 386 non Speg. - Plagulis epiphyllis, 0,5-1 cm. latis, confluentibus, aggregatis; hyphis subiculi 6-8 μ crassis, obscure brunneis, laxe septatis, hyphopodiis subglobosocapitatis, alternis, 7-9 µ latis, integris, sessilibus; peritheciis 230-300 µ diam., late hemisphaericis, stellatim dehiscentibus, basi hyphis rectis crebris in mycelium excurrentibus, opace ex hyphis brunneis 4-5 μ cr. usque ad centrum egregie dentato-serratis contextis; ascis globosis vel ovatis, 70-90 \* 45-60, octosporis, sessilibus, jodi ope non coerulescentibus, paraphysibus firmis, 2,5-4 μ crassis, griseo-hyalinis, septatis obvallantibus; sporidiis ellipsoideis, brunneis. vix constrictis, utrinque rotundatis, 30-35 × 16-19, cellulis subaequalibus.

Hab. in foliis vivis Styracis acuminatae (Styracaceae), Sao Leopoldo, Rio Grande do Sul, Brasilia.

PARASTERINA Theiss. et Syd., Ann. Mycol. XV, 1917, p. 246 et p. 420. — Est Asterina paraphysibus donata.

1. Parasterina Ramosii Syd., Ann. Mycol. XV, 1917, p. 246. — Epi- 4892 phylla, plagulas primitus orbiculares minutas sed mox confluendo majores et irregulares formans; mycelium ex hyphis rectangulariter ramosis septatis (articulis 14-30 μ longis) castaneo-brunneis 5-7 μ crassis compositum; hyphopodia sat numerosa, typice (sed inconstanter) opposita, bicellularia, 12-18 × 6-8, crasse cylindracea, recta, integra, cellula basali minuta; thyriothecia densiuscule disposita, primitus rotundata, 200-300 μ.diam., dein elliptica et usque 600 μ longa, 200-250 μ lata, hemisphaerica, crustose fimbriata, radiatim contexta, opaca, stellatim dehiscentia; asci elliptici vel ovati, 50-80 × 35-48, octospori, paraphysati; sporae ellipticae vel oblongo-ellipticae, medio septatae et parum constrictae, in maturitate atrae, opacae, 25-30 × 12-14.

Hab. in foliis Eugeniae sp. (Myrtaceae), Rizal, Luzon, Ins. Philipp. (M. RAMOS).

DIMEROSPORIUM Fuck. — Syll. I p. 51, IX p. 401, XI p. 257, XIV p. 466, XVI p. 408, XVII p. 533, XXII p. 33.

1. Dimerosporium Triumfettae Arnaud, Ann. École Nat. Agricult. Montpellier, t. 16., 1918, p. 180, tab. 36. — Maublanc A., Bull. Soc. Mycol. de Fr. t. 36., 1920, p. 39, fig. 7-9. — Maculis epiphyllis, 2-3 mm. diam., numerosis; hyphis ramosis, septatis, sat pallide brunneis, 4 μ crassis; hyphopodiis globosis v. piriformibus, sessilibus, 5-7 μ diam.; peritheciis minutis, 60-100 μ diam., primum depressoclypeatis, distincte radiatis, dein hemisphaericis, gelatinosis; ascis globosis vel late ovoideis, sessilibus, 30-40 μ diam., aparaphysatis; sporidiis octonis conglobatis, brunneis, ovoideis v. subpiriformibus, 1-septatis, constrictis, loculo inferiore saepe paulo angustiore, 18-23 × 10-12, episporio minute granuloso.

Hab. in foliis vivis Triumfettae sp. (Tiliaceae), Rio de Janeiro, Brasilia.

QUESTIERIA G. Arnaud, Ann. Ecole Nat. Agricult. Montpellier, t. 16., 4894
1918, p. 186, tab. XL, XLI (Etym. a QUESTIER nom. prop.). — A
Dimerosporio praecipue differt parietibus stromatis demum gelatinosis. — Sec. Auct., huc pertinent ut subgenera:

Eu-Questieria Arnaud 1. c., stromatibus omnino gelatinosis subanhystis.— Typus Questieria pulchra (Sacc. in Dimerosporio) Arnaud. Balladynopsis Arnaud l. c., stromatibus parietibus brunneis contextu vix distincto praeditis. — Typus Questieria monotheca (Patouill. et Gaill. in Asterina) Arnaud.

- ASTERINELLA Theiss., Brot. Ser. Bot. X (1912) p. 165. (Etym. ab affini Asterina). A gen. Asterina distinguitur mycelio hyphopodiis destituto.
- 1. Asterinella venusta Sydow, Ann. Mycol. 18., 1920, p. 101. Pla-4895 gulas amphigenas tennissimas orbiculares minutas 1-3 mm. diam. formans; mycelium ex hyphis radiantibus obscure fuscis subrectis vel leniter undulatis rectangulariter ramosis 3-4 μ crassis haud hyphopodiatis septatis formatum; thyriothecia copiosa, gregaria orbicularia vel elliptica, 60·100 × 50·70, radiatim ex hyphis rectis crebre septatis (articulis 3-5 μ longis) 3-3,5 μ latis obscure fuscis contexta, ad ambitum non vel parce fimbriata; asci aparaphysati, 20·30 × 20, 8-spori; sporae oblongae, ad apicem rotundatae, basim versus leniter attenuatae, supra medium constrictae, circiter 15·20 × 5-6 (nondum perfecte maturae).

Hab. in foliis Anaxagoreae luzonensis (Anonaceae), Mt. Maquiling, prov. Laguna, Ins. Philippin. (C. Collado).

2. Asterinella obesa Syd., Enum. Philipp. Fungi II, in Philipp. Journ. 4896 of Sci. VIII (1913) p. 490. — Epiphylla, maculas atras, laxas, rotundatas, 2-8 mm. diam. efformans; mycelio laxo, ex hyphis longis, parce ramesis, remote septatis obscure brunneis, crassis, 6-10 μ latis composito; hyphopodiis nullis; peritheciis laxe aggregatis, fere semper elongatis, 250-400 × 125-200, rarius rotundatis, centro elevatis, rima longitudinali apertis, aterrimis, amoene radiatim contextis, contextu opace olivaceo-atro ex hyphis 3,5-4,5 μ latis composito, ambitu hyphis numerosis crassis 5-8 μ latis obscure olivaceo-brunneis fimbriatis; ascis globosis, subglobosis vel ovatis, aparaphysatis, 50-60 × 40-52; sporidiis conglobatis, ellipsoideis vel ellipsoideo-oblongis, ex hyalino obscure olivaceo-brunneis, levibus, 32-38 × 16-20, loculo superiore maximo, inferiore minimo, 7-10 μ tantum longo et omnino appendiculiformi saepe dilutiore.

Hab. in foliis Canarii villosi (Burseraceae), Luzon, Prov. Nueva Vizcaya, ins. Philipp. (Mc. Gregor). — Hyphis crassis et sporidiis inaequiloculis praecipue facileque distincta.

Asterinella Santiriae Syd., Ann. Mycol. XV, 1917, p. 248. — Am- 4897
phigena, plerumque epiphylla, plagulas irregulares usque 1 cm.
diam. formans; mycelium ex hyphis rectangulariter laxeque ramo-

sis plerumque rectis 6.9 \u03c4 crassis septatis compositum, hyphopodiis destitutum, sed una alterave cellula subnodose incrassata (usque 11 u crassa); thyriotecia laxe gregaria, rotundata, 300-350 u diam. vel elliptica usque 400 × 250-300, ambitu fimbriata, radiatim ex hyphis 4 u crassis rectis contexta, obscure castaneo-brunnea, subopaca: asci ovato-globosi, aparaphysati, 50 75 × 45-60, octospori: sporae oblongo-ellipsoideae, utrinque rotundatae, inaequaliter septatae, cellula superiore duplo majore, brunneae, leves, 32-36 \* 17-19.

Hab. in foliis Santiriae nitidae (Burseraceae), pr. Paete. Laguna, Ins. Philipp. (C. F. BAKER).

4. Asterinella Diptercearpi H. et P. Sydow, Ann. Mycol. XII, 1914, 4898 p. 558. - Amphigena, plerumque epiphylla maculas 2-10 mm. diam. efformans; mycelio laxo ex hyphis crassis ramosis opace fuscis 6-8 µ latis hyphopodiis destitutis composito; thyriotheciis laxe aggregatis, rotundatis et 140-200 µ diam. v. elongatis et usque 400 µ longis, atris, contextu amoene radiato ex hyphis rectis fuscis 4-6 µ crassis septatis (articulis 10-15 µ long.) composito; ascis ovato-globosis, octosporis, aparaphysatis, 55.70 × 35.45; sporidiis conglobatis, oblongis, infra medium 1-septatis, ex hvalino brunneis, utrinque rotundatis, non constrictis, levibus, 24-28 > 8-10.

Hab. in foliis Dipterocarpi verniciflui (Dipterocarpaceae), Angat prov. Bulacan, Ins. Philippin. (M. RAMOS). - A Morenoella Dipterocarpi (P. Henn.) Theiss. omnino diversa.

5. Asterinella luzonensis Syd., Enum. Philipp. Fungi II, in Philipp. 9899 Journ. of Sci. VIII (1913) p. 491. - Mycelio hypophyllo, plerumque parcissimo, vix visibili, ex hyphis longiusculis, flexuosis, anastomosantibus, fusco-brunneis, 3,5-5 µ crassis, septatis (articulis 16-22 μ longis), levibus composito; hyphopodiis nullis; peritheciis plerumque in greges 0,5-1 cm. latos laxissime dispositis, inversis, variabilibus, ambitu aut rotundatis aut irregularibus usque valde elongatis, 150-200 μ diam. vel usque ad 800 × 170, strato simplici ex hyphis rectis fusco-brunneis 3,5-4 µ cr. contextis, poro centrali vel rima longitudinali dehiscentibus; ascis globosis vel subglobosis, 50-62 × 40-52, octosporis, aparaphysatis; sporidiis oblongis, utrinque rotundatis, medio 1 septatis, vix vel leniter constrictis, levibus, tandem brunneis, 29-33 × 13-15.

Hab. in foliis Shoreae polyspermae (Dipterocarpaceae). Luzon, Prov. Bataan, ins. Philipp. (GRAFF). - Affinis A. Humiriae (P. Henn.) Theiss., a qua praecipue peritheciis majoribus plerumque elongatis differt.

6. Asterinella Elacagni Sydow, Ann. Mycol. 18., 1920, p. 101. — Epi- 4900 phylla, plagulas orbiculares 2-4 mm. diam. atras formans; mycelium sat ramosum, anastomosans, ex hyphis undulato-tortuosis fuscis ca. 3 μ crassis compositum, haud hyphopodiatum; thyriothecia gregaria, orbicularia vel elliptica, 90-150 × 70-100, opace contexta; asci ovati, 25-35 × 25-30, 8-spori, ut videtur aparaphysati; sporae oblongae, utrinque rotundatae, fuscae, leves, medio septatae, parum constrictae, 18-20 × 7-8, loculis fere aequalibus.

Hab. in foliis Elaeagni philippinensis (Élaeagnaceae), Mt. Maquiling, prov. Laguna Ins. Philippin. (C. COLLADO).

7. Asterinella ramuligera Syd., Philipp. Journ. of Sc., Bot., IX, 1914, 4901 p. 182. — Amphigena, plagulas griseo-atras mediocres vel majusculas 0,5-3 cm. latas irregulares formans; mycelio laxiusculo, ex hyphis longis fuscis 6-8 μ crassis remote septatis ramosis haud hyphopodiatis, sed cum ramulis novellis copiosis, 20-30 μ longis ad apicem lobatis et hyphopodia erecta simulantibus obsitis composito; peritheciis sparsis ambitu orbicularibus, inversis, 140-200 μ diam., non vel parum fimbriatis, stellatim dehiscentibus, contextu obscure brunneo, ex hyphis ca. 3 μ crassis crebre septatis (articulis 7-10 μ longis) composito; ascis globulosis vel ovatis, aparaphysatis, tenuiter tunicatis, 35-47 μ longis, 30-40 μ latis, octosporis, sporidiis oblongis, utrinque late rotundatis, medio 1-septatis et constrictis, ubique verrucosis, ex hyalino fuscis, 20-26 \* 10-12.

Hab. in foliis vivis Microdesmidis casearifoliae (Euphorbiaceae), Talawan Taytay, Ins. Philipp. (MERRILL).

8. Asterinella Hydnocarpi H. S. Yates, Philipp. Journ. Sc. XII (1917) 4902 p. 372 (corr. Asterinella Hydnocarpiae). — Epiphylla, maculas irregulares, 5-8 mm. diam., v. confluentes et superficiem foliorum plus minusve obtegentes efformante; mycelio laxo ex hyphis radiantibus 8 μ cr. brunneis composito, ramis irregularibus; hyphopodiis nullis; peritheciis numerosis in quaque macula, rotundatis et 300-400 μ diam., obscure brunneis, subopacis, contextu radiato, ex hyphis rectis brunneis 5 μ diam. composito, ambitu fimbriatis, poro centrali dehiscentibus; ascis globosis, 70 μ diam., octosporis, paraphysatis, sporidiis oblongo-ovoideis, medio 1-septatis, constrictis, fuscis, loculo supero parum latiore, 40-50 ε 25-28.

Hab. in foliis Hydnocarpi falcati (Flacourtiaceae), Catubing River, Samar, Ins. Philipp.

9. Asterinella gracilis H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4903 559. — Hypophylla, pro ratione saepe aegre conspicua, plagulas

effusas griseo brunnens tenues formans; mycelio ex hyphis valde anastomosantibus ramosis flavo-fuscis tenuibus 2,5-4 µ crassis remote septatis saepe leniter noduloso-tortuosis composito; hyphopodiis nullis; thyriotheciis dense sparsis ambitu rotundatis, 90-140 µ diam. v. elongatis tune 180-230 µ long. et 70-90 µ latis, strato simplici ex hyphis 3-4 µ crassis crebre septatis (articulis 5-8 µ longis) flavo-fuscis rectis v. fere rectis compositis, mox valde apertis, ad marginem non v. parum fimbriatis, membrana basali nulla; ascis ovato-globosis, 20-28 \* 18-22, paraphysatis, octosporis; sporidiis ovato-oblongis, utrinque obtusis, levibus, ex hyalino fuscidulis. 18-20 × 7-8, loculo supero parum latiore.

Hab. in foliis Derridis diadelphae (Leguminosae), Sampaloc prov. Bulacan, Ins. Philipp. (M RAMOS). - Ab Asterina Derridis P. Henn. omnino diversa. Potius Ast. trachycarpae Syd. proxima a qua differt sporidiis minoribus.

10. Asterinella Loranthi Syd., Enum. Philipp. Fungi II, in Philipp. 4904 Journ. of Sci. VIII (1913) p. 490. - Hypophylla, maculas atras irregulares plus minusve longas efformans, saepe totam folii superficiem occupans; mycelio parcissimo ex hyphis anastomosantibus parcissime septatis, flavo-brunneis vel brunneis 4-6 µ cr. composito; hyphopodiis nullis; peritheciis laxe aggregatis, rotundatis. 140-180 µ diam., subcarbonaceis, stellatim dehiscentibus et mox late apertis, atris, contextu radiato, olivaceo-fusco, ex hyphis breviter articulatis (articulis 6-8 \* 2,5-4) strato simplici composito; ascis e globoso ovatis, 45-60 × 32-45, octosporis; sporidiis ellipsoideo-oblongis, utrinque late rotundatis, medio 1-septatis et valde constrictis, loculis facile secedentibus, mox fusco-atris, tota superficie verrucosis, 26 34 \* 14-16; pycnidiosporis simul praesentibus, continuis, subglobosis vel ovatis, fuscis, 18-22 v 13-15.

Hab. in foliis vivis Loranthi leytensis (Loranthaceae), Leyte, Dagami, ins. Philipp. (RAMOS). — Sporidia matura intense atra; asci interdum, ut videtur, 4-6-spori.

11. Asterinella Anamirtae H. et P. Sydow, Ann. Mycol. XII, 1914, p 1905 558. — Hypophylla, plagulas irregulares tandem confluentes effusas tenerrimas formans; mycelio ex hyphis dilute fuscis 3,5-4 µ crassis flexuosis undulatis longe articulatis anastomosantibus formato; hyphopodiis nullis (passim autem oriuntur hinc inde ramuli myce liales hyphopodia simulantes); thryiotheciis gregariis, applanatis, 80-100 μ diam., mox late apertis, griseo-brunneis, ex hyphis rectis 3.4 \mu crassis crebre septatis (articulis 5.7 \mu longis) strato simplici

radiatim contextis, peripherice hyphis singulis fimbriatis, membrana basali distincta praeditis; ascis ad summas hyphas hyalinas vel subhyalinas oriundis, primo globoso-ovatis, 35-45  $\mu$  diam., dein piriformibus 50-60  $\approx$  35-40, aparaphysatis, octosporis; sporidiis conglobatis, c staneo-brunneis, medio 1-septatis et valde constrictis, 22-25  $\mu$  longis, 9-11  $\mu$  latis, grossiuscule verrucosis, loculo supero paullo subinde majore; thyriotheciis conidiigeris similibus; conidiis subglobosis usque ovatis, continuis castaneo-brunneis, 12-16  $\mu$  longis, 11-13  $\mu$  latis.

Hab. in foliis An am irtae cocculi (Menispermaceae), Angat prov. Bulacan, Ins. Philippin (M. Ramos). — Aster diaphanue (Syd.) Theiss. proxima sed omnibus partibus minori.

12. Asterinella amazonica Syd., Ann. Mycol. XIV, 1916, p. 92. — Hy-4906 pophylla, plagulas parum perspicuas 1-2 cm. latas formans; mycelio laxo, ex hyphis irregulariter opposite vel alterne ramosis anastomosantibus saepe etiam lateraliter connexis fuscis 5-7 μ crassis flexuosis remote septatis composito; hyphopodiis nullis, thyriotheciis paucis in quaque plagula, inversis, hemisphaerico-lenticularibus, ambitu orbicularibus 100-160 μ diam., vel elongatis et tunc usque 250 μ longis 80-120 μ latis, vertice irregulariter dehiscentibus, ambitu breviter fimbriatis ex hyphis flexuosis fuscis creberrime septatis (articulis 5-7 μ longis 3 μ crassis) composito; ascis subglobosis usque ovatis, aparaphysatis, 32-40 × 20-35, octosporis; sporidiis ellipsoideo-oblongis, utrinque rotundatis, medio 1-septatis et constrictis, levibus, flavis, 20-24 × 9-11.

Hab. in foliis Ramisiae amazonicae (Nyctaginaceae), Manaos, Rio Negro, Brasilia (E. ULE).

13. Asterinella Calami Syd., Philipp. Journ. of Sc., Bot., IX, 1914, p. 4907
182. — Hypophylla, irregulariter distributa, magnam folii partem
occupans; mycelio perparco, ex hyphis fuscis, parce ramosis septatis (articulis 10-12 μ longis), 3-5 μ latis rectiusculis composito;
hyphopodiis nullis; peritheciis inversis, irregulariter sparsis, planis,
ambitu irregulariter rotundatis 250-420 μ diam., contextu ex hyphis
toruloso-flexuosis copiose anastomosantibus fuscis 3-4 μ crassis composito, centro subatro opaco; ascis ovato-globosis, paucis tantum
visis; sporidiis ellipsoideo-oblongis, utrinque rotundatis, medio 1septatis et constrictis, levibus, obscure brunneis, 34-35 × 15-17.

Hab. in foliis vivis Calami sp. (Palmae), Palawan, Mount Capoas, Ins. Philipp. (MERRILL).

14. Asterinella lugubris Syd., Enum. Philipp. Fungi II, in Philipp. 4908

Journ. of Sci. VIII (1913) p. 491. — Mycelio epiphyllo, tenui, plus minusve effuso, parce maculiformi, ex hyphis laxe intertextis, 3-5  $\mu$  cr., fuscis, longiusculis, ramosis, non vel parce septatis composito; hyphopodiis nullis; peritheciis sparsis, variabilibus aut rotundatis, 100-140  $\mu$  diam., aut valde elongatis, usque ad 600  $\times$  70-120, subinde etiam triangularibus, ambitu hyphis radiantibus cinctis, stellatim vel rima longitudinali dehiscentibus, pluristratosis, contextu atro, opaco; ascis ovatis vel oblongis, sessilibus, 35-50  $\times$  24-26, octosporis; paraphysibus numerosis, distinctis, ramosis, hyalinis, ad apicem lenissime incrassatis; sporidiis oblongis, utrinque rotundatis, medio 1 septatis, valde constrictis, levibus, tandem fuscis, 18-24  $\times$  8-9.

Hab. in foliis Ixorae philippinensis (Rubiaceae), Luzon, Manila, ins. Philipp. (MERRILL).

15. Asterinella distinguenda Syd., Enum. Philipp. Fungi II, in Philipp. 4909 Journ. of Sci. VIII (1913) p. 492. — Mycelio amphigeno, tenui, plus minusve effuso, parce maculiformi, ex hyphis laxe intertextis, 3-5 μ cr., fuscis, longiusculis, ramosis, anastomosantibus, parce septatis composito; hyphopodiis nullis; peritheciis aggregatis, irregularibus, plerumque ellipticis vel oblongis, rarius rotundatis, 150-225 × 100-170, ambitu hyphis radiantibus cinctis, stellatim vel rima longitudinali dehiscentibus, tandem plus minusve late apertis, pluristratosis, contextu atro opaco; ascis e globoso ovatis, sessilibus, 20-35 × 15-19, octosporis, aparaphysatis; sporidiis conglobatis, ovatooblongis, medio 1-septatis et leniter constrictis, ex hyalino olivaceo-fuscis, levibus, 12-14 × 5,5-6,5, loculo superiore plerumque latiore; pycnidiis simul praesentibus peritheciis simillimis, sporulis subrectis vel falcatis, continuis, hyalinis, 15-18 × 1-1,5, sporophoris brevissimis, 4-6 μ longis fultis.

Hab. in foliis Ixorae philippinensis (Rubiaceae), Luzon, Manila, ins. Philipp. (MERRILL). — Habitu A. lugubri Syd. subsimili sed notis variis distincta.

16. Asterinella palawanensis Syd., Philipp. Journ. of Sc., Bot., IX, 1914, 4910 p. 182. — Plagulas hypophyllas atras 0,5-1,5 cm. diam., orbiculares formans; mycelio ex hyphis tenuibus 3-5 μ crassis dilute fuscis parce septatis sed copiose anastomosantibus et saepe lateraliter conjunctis flexuosis composito, hyphopodiis nullis; peritheciis sparsis, rotundatis, applanato-convexis, atris, opacis, 200-350 μ diam., ad ambitum fimbriatis, contextu opaco; ascis ovatis vel oblongis, brevissime stipitatis, 45-55 μ longis, 24-34 μ latis octosporis; pa-

raphysibus numerosis, ascos superantibus, 1 µ crassis; sporidiis distichis, oblongis, utrinque rotundatis, medio 1-septatis et constrictis, levibus, ex hyalino fuscis, 18-24 × 7-8,5.

Hab. in foliis Plectroniae sp. (Rubiaceae), (socia Balladyna velutina), Palawan, Taytay, Ins. Philipp. (Merrill.).

17. Asterinella creberrima Syd., Ann. Mycol. XV, 1917, p. 247.— Hypophylla, effusa, totam fere folii superficiem occupans; mycelium ex hyphis fuscidulis 2,5-3,5 μ latis flexuosis longe articulatis ramosis formatum; hyphopodia desunt; thyriothecia creberrime stipata, orbicularia, 70-120 μ diam., e strato simplici hypharum rectarum ca. 2,5 μ latarum crebre septatarum fuscidularum radiatim contexta, per aetatem late aperta, peripherice hyphis longiusculic flexuosis fimbriata; asci ovato-globosi, distincte paraphysati, 35-40 × 30-35, octospori; J +; sporae oblongae, medio vel circa medium septatae et valde constrictae, loculis fere aequalibus, vel supero parum majore, brunneae, leves, 24-26 × 12-13; conidia ovata vel ovato-globosa, continua, obscure castanea, 16-19 × 14-16.

Hab. in foliis Premnae sp. (Verbenaceae), Los Baños, Laguna, Ins. Philipp. (C. F. BAKER).

18. Asterinella saginata Syd., Ann. Mycol. XV, 1917, p. 248. — Pla. 4912 gulas hypophyllas indeterminatas saepe confluentes effusas usque 2 cm. longas (vel ultra?) formans; mycelium ex hyphis anastomosantibus ramosis 6.8 μ crassis rectiusculis vel flexuosis subinde torulosis obscure brunneis remote septatis haud hyphopodiatis compositum; thyriothecia gregaria, rotundata, 300-500 μ diam.; opaca, subatra, radiatim ex hyphis 3,5.4,5 μ crassis composita, stellatim dehiscentia, ambitu hyphis similibus plus minus longe fimbriata; asci ovati, aparaphysati, 60-80 × 40-60, octospori; sporae-oblongo-ellipsoideae, utrinque rotundatae, medio septatae, constrictae, leves, fuscae, 40.44 × 20-23.

Hab. in foliis Pinangae sp. (?), Bulusan Volcano, Sorsogon (M. RAMOS) et Pinangae Elmeri, Benguet, Ins. Philipp. (E. D. MERRILL).

19. Asterinella Gmelinae Sacc., Notae Myc. XX, Nuovo Giorn. Bot. it. 4913 23., 1916, p. 199 (etiam sub Asterina). — Plagulis amphigenis, irregulariter subcircularibus 3-5 mm. lat., dilute fuligineis, laxe reticulatis; hyphis non hyphopodiatis, e perithecio radiatim divergentibus, ramulis brevibus oppositis v. alternis, sursum versis et leviter curvis utrinque acutis; peritheciis applanato-dimidiatis 160 μ diam. radiatim contextis, margine vix fimbriatis, brunneis; ascis

sphaeroideo-ellipticis 60-80  $\mu$  diam., v. 80  $\times$  65, suboctosporis; sporidiis tristichis, obovato-oblongis, utrinque rotundatis, levibus, 38  $\times$  14-16, demum 35  $\times$  18-19, atre fuligineis, loculo superiore paullo crassiore.

Hab. in foliis languidis, G m e l i n a e sp. (Verbenaceae), Los Baños, ins. Philipp. — Aster Humiriae (P. Henn.) Theiss. proxima.

20. Asterinella quinta (Rac) Theiss., Broteria, Ser. Bot. X (1912) p. 105 4914 c. icon, Asterinella quinta Rac. in herb., Java. — Mycelio parco evanido ex hyphis tenerrimis, laete veridulo-fuscis laxe ramosis 2,5 μ cr. formato; hyphopodiis nullis; peritheciis sparsis, 100-140 μ diam. orbicularibus, applanato-scutatis, contextu viridulo-fusco, ex hyphis 4 μ cr., rectiusculis, subtorulosis, centro obscurioribus, peripheriam versus griseo-fuligineis, articulis 6-8 μ longis versus centrum brevioribus fere cubicis, 5 μ long radiato-contextis, vix fimbriatis; ascis ovato-globosis 35-45 μ diam. v. 50-60 × 35-40, aparaphysatis, ex summis hyphis hyalinis flexuosis oriundis, 8-sporis, jodi ope nulla; sporidiis conglobatis oblongis, fuligineo-brunneis, membrana atra levi, 22-27 × 10-12, cellula sup. latiore.

Hab. (matrix et locus omissi), in Java. - Ab affine A. Cryptocaryae mycelio recedit.

21. Asterinella lepidotricha Theiss., Ann. Mycol. XIV, 1916, p. 271.— 4915 Epiphylla, soris minutis dense irregulariterque sparsis; hyphis mycelialibus delicatulis, vix 2,5 μ crassis, absque hyphopodiis, laxe reticulato-ramosis, rectiusculis, nusquam dense contextis. Thyriotheciis orbicularibus, planis, scutatis, 100-130 μ diam., ex hyphis fusco-brunneolis, angustissimis (2-3 μ cr.), peripheriam versus subcrenulatis radiato-contextis. Ascis ovato-ellipticis, aparaphysatis, 45-50 × 30-33, brevissime stipitatis, octosporis. Sporis conglobatis, brunneis, medio septatis et constrictis, 16-17 μ longis, cellula superiore 8 μ, inferiore 6,5 μ latis. Thyriothecia conidiifera ascigeris similia, minora, 55-70 μ diam.; conidiis brunneis, piriformibus, continuis, 19-23 × 12-14 (Asterostomula lepidotricha Theis. n. sp.,

Hab. in foliis indeterminatis, Los Baños ins. Philippinensium (S. R. REYES, comm. BACKER).

PRILLIEUXINA G. Arnaud, Ann. Ecole Nat. Agricult. Montpellier, t. 16., 4916 1918, p. 161 (etym. a Cl. Ed. Prillieux). — Tab. XXIX. — Stromata ut in *Dimerosporio* Fuck.; mycelio externo stigmopodiis distinctis destituto ut in *Asterinella*; mycelio interno stromatibus tanctum nee mycelio externo connexo. — Huc ducenda est secund.

Auctor Asterinella Winteriana Pazschke. Status conidicus Prillieuxinae Winterianae sistit Leprieurina Winteriana.

- HARIOTULA G. Arnaud, C. R. Ac. Sc. Paris t. 164., 1917, p. 888; Ann. 4917 École Nat. Agr. Montpellier, t. 16., 1918, p. 201, tab. XLIV.—
  (Etym. a cl. mycol. Hariot). Est Asterinella rhizomatica, idest mycelio communi incluso praedita. Species typica Har. Loranthi (Karst. et Har., ut Clypeolum) Arnaud.
- OPASTERINELLA Spegaz., Rel. Myc. trop. in Bol. Ac. Nac. Cienc. Cordoba, t. XXIII, 1919, Extr. p. 136. Caracteres ex tabula synoptica p. 436 relata.
- 1. Opasterinella Tonduzi Spegaz., Fungi Costaric. nonn., in Bol. Ac. 4918 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 209. Maculae nullae v. vix pallescentes indeterminatae; subiculum amphigenum arachnoideum tenue laxum, ex hyphis rectiusculis alterne ramosis parce septatis, hyphopodiis nodulisque plane destitutis, efformatum; thyriothecia parva 80·100 μ diam. atra glabra, astoma, stellatim dehiscentia, margine crenulata ac fimbriatula, membrana basali destituta, hyphis tenuibus radiantibus vix undulatis composita; asci subglobosi aparaphysati 40·45 × 40; sporae laeves didymae, loculis subaequalibus, fuligineae, 20·24 × 10·12.

Hab. in foliis Xylosmatis Salzmanni (Flacourtiaceae), prope Carthaginem Costarica, America trop.

MAUBLANCIA Arnaud, Ann. Ecole Nat. Agricult. Montpellier, t. 16., 1918, p. 158. — Maublanc, Bull. Soc. Mycol. de Fr. t. 36., 1920, p. 39. — Perithecia, asci et sporidia ut in genere Asterinella Theiss. (emend. Arnaud), sed mycelium hyphopodia gerens.

1. Maublancia Myrtacearum Arnaud, l. c., tab. 28. — Maublanc A., l. c. p. 4919 39 fig. 3-6. — Maculis epiphyllis, orbicularibus, diffusis, 3-6 mm. diam. Hyphis brunneis, 4-6 μ crassis, crasse tunicatis, ramosis, paulum undulatis, fragilibus; hyphopodiis numerosis, bicellularibus, cellula infer. pedicelliformi, simplic v. lobata, super. lobata, 15-20 × 12-16. Peritheciis atris, sparsis, orbicularibus, 300-450 μ diam., tunica crassa, opaca, ex hyphis radiantibus, ad marginem tortuosis pallidioribusque formata. Ascis clavatis v. subcylindricis, breviter pedicellatis, sursum rotundatis, crasse tunicatis, 70-90 × 25-30, 8-sporis (semper?). Sporidiis distichis, claviformibus, inaequaliter 1 septatis, 30-35 × 14-16, cellula super. ovoidea, saepe ad apicem attenuata

 $(18-20 \approx 14-16)$ , infer. minore, fere conoidea, obtusa  $(12-14 \approx 12)$ , pallide brunneis.

Hab. in foliis vivis Myrtaceae cujusdam, Ipanema prope Rio-de-Janeiro, Brasiliae.

- ASTEROMYXA Theiss. et Syd., Ann. Mycol. XV, 1917, p. 419. Mycelium superficiale exhyphopodiatum. Thyriothecia inversa, radiantia, dimidiata, poro centrali praedita, setulosa, dein mucoso-incrustata. Hymenium depressum, simplex, polyascum. Asci clavati ovoidei aparaphysati, octospori. Sporidia brunuea, bilocularia, elongata. Typ. gen. Asterom. kirtula (Speg. ut Dimeriella) Theiss. et Syd. l. c. Syll. XXII p. 37.
- CLYPEOLINA Theiss., Centralbl. f. Bakter., II Abt. Bd. 34., 1912, p. 234, ut sectio). Theiss. in Theiss. et Sydow, Ann. Mycol. XV, 1917, p. 419. Est Clypeolella mycelio exhyphopodiato donata.
- 1. Clypeolina apus (Theiss.) Theiss. in Theiss. et Syd. l. c., Clypeo-4921 lella Apus Th. Centralbl. Bakt. II Abt. 34. (1912) p. 234. Subiculo ex hyphis fusco-brunneis, irregulariter ramosis, 5,5-6,5 μ cr., dense junctis composito; hyphopodiis nullis; peritheciis inversis, applanato-conicis, orbicularibus, brunneis, 85-140 μ diam., vertice mox irregulariter resorpto; ascis primo cylindraceo-elongatis, maturis ellipsoideo-ventricosis, octosporis, aparaphysatis, 42-56 × 22-30; sporidiis oblongo-ellipsoideis, 18-20 × 6,5-9, griseo-brunneis, utrinque rotundatis, ad septum constrictis, loculo supero paullo latiore sed minore.

Hab. in foliis Bignoniaceae cujusdam, Sao Leopoldo, Rio Grande do Sul, Brasilia.

- THALLOCHAETE Theissen, Ann. Mycol. XI, 1913, p. 501. Thyriothecia superficialia, inverse radiata; mycelio ramoso, septato, setas erectas emittente. Asci octospori, aparaphysati. Sporae phaeodidymae.
- 1. Thallochaete Ingae Theiss. l. c. p. 501, fig. IV et tab. XXI fig. VI.— 4922 Hypophylla. Mycelio arachnoideo, atro; hyphis irregulariter laxe ramosis, rectis, tenerrimis, laete brunneis, vix 3 μ cr., septis distantibus, facile hinc inde ruptis; setis mycelialibus concoloribus, erectis, basi 5 μ cr., non geniculatis, flexuosis, septatis (cellulis 22-26 μ long.), 100 150 μ long., apice acutiusculis hyalinis, integris; thyriotheciis dense sparsis, inversis concentrice sulcatis, strato

hypharum simplici, membranaceis, applanatis, papilla centrali hemisphaerica praeditis, orbicularibus 100·180  $\mu$  v. ellipsoideis 170·250 × 100·170, ostiolo non typico (cellulis apicalibus parenchymaticis ruptis) rotundo v. elongato; ascis ovato-clavatis, aparaphysatis, apice late rotundatis, octosporis,  $28\cdot35 \times 16\cdot20$ ; sporis laete coloratis, ellipsoideis, tristichis, utrinque rotundatis,  $16 \times 5\cdot6$ , medio septatis constrictisque, cellula superiore vix latiore; conidiis tricellularibus, utrinque truncatis, brunneis, cellula infera subhyalina,  $18\cdot22 \times 6\cdot8$ . Alia conidia, forte ex hyphis mycelialibus oriunda, fusoidea, 4-cellularia, luteola, subcurvula,  $22\cdot25 \times 2.5$ .

Hab. in foliis Ingae sp. (Leguminosae), Manaos, Amazones, Brasilia (ULE).

CLYPEOLELLA v. Höhn. — Syll. XXII p. 544 (ut Subgen.). — Theiss. et Syd., Ann. Mycol. XV, 1917, p. 419.

1. Clypcolella Ricini Rac. ap. Theiss. in Centralbl. Bakt. II Abt. 34. 4923 (1912) p. 233. — Asterina Ricini Rac. in herb. — Amphigena griseo-atra; subiculo ex hyphis brunneis, dense ramosis, 4-5 μ cr., crebre septatis, cellulis singulis 10-30 μ longis composito; hypho podiis unicellularibus, subglobosis, 8-10 μ diam.; conidiis 4-cellularibus, curvatis, utrinque attenuatis et apiculatis, 28-34 × 9-11, cellulis terminalibus pallide brunneis, medianis obscurioribus; peritheciis minutissimis, nudo oculo vix conspicuis, brunneis, rotundatis vel ovoideis, 50-110 μ latis, applanatis, margine haud fimbriatis; ascis globosis, 26-28 μ diam., octosporis; sporidiis levibus, medio septatis, leniter constrictis, loculis paullo inaequalibus, diu hyalinis demum episporio brunneolo, 17-20 × 9-10.

Hab. in foliis Ricini communis (Euphorbiaceae), Buitenzorg, Java.

2. Clypeolella Solani Theiss., Centralbl. Bakt. II Abt. 34. (1912) p. 233.— 4924 Subiculo ex hyphis fuscis, undulatis, opposite vel alterne ramosis, dense intertextis, 5,5-6,5 μ cr. composito; hyphopodiis alternis, sessilibus, continuis, globosis vel hemisphaericis, integris, 8-11 μ diam.; conidiis hyphogenis 3-septatis, rectis curvulisve, 28-32 × 12-14, cellulis mediis brunneis, extremis hyalinis minoribus, rotundatis vel acutatis; peritheciis minutis, brunneis, 35-55 μ diam., orbicularibus, applanatis, irregulariter e centro resorptis; ascis ovato-globosis, octosporis, aparaphysatis, 45-55 × 38-45; sporidiis demum castaneo-brunneis, 25-27 × 10-13, levibus, utrinque rotundatis, cellula superiore latiore.

Hab. in foliis Solani sp. (Solanaceae), Sao Leopoldo, Rio Grande do Sul, Brasilia.

- ENGLERULASTER v. Höhn., Fragm. z. Mykol. 1910, n. 520. Theissen, Broteria, 1914, p. 78; Theiss. et Syd., Ann. Mycol. XV, 1917, p. 420.
- Englerulaster continuus H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4925 201. Amphigenus, plerumque epiphyllus, plagulas aterrimas orbiculares 2-4 mm. diam. tandem confluentes majores et irregulares formans; hyphis mycelii atro-brunneis, 6-7 μ latis, rigidulis, crebre septatis; hyphopodiis alternantibus, unicellularibus, semiglobosis, 8-12 μ latis et altis; thyriotheciis primitus plane convexis, tandem multo magis convexis, 200-300 μ diam., subopacis; ascis ovatis, aparaphysatis, 55-75 × 40-50, octosporis; sporidiis oblongis, obscure brunneis, medio vel circa medium septatis, constrictis, levibus, 25-34 × 12-16.

Hab. in foliis Ilicis pedunculosae (Aquifoliaceae), prov. Mino Kawauye-mura, Japonia (K. HARA). — Engley. alpina (Rac.) Theiss. proximus.

2. Englerulaster atrides Syd., Ann. Mycol. XV, 1917, p. 239. — Amphigena praecipue epiphylla, plagulas omnino irregulares minutas vel majores 2-10 mm. diam. tenues formans; mycelium laxe ramosum, ex hyphis brunneis 5,5-6,5 μ crassis rectiusculis vel flexuosis septatis (articulis 20-28 μ longis) compositum, hyphopodia sparsa, modice copiosa, continua, 10-13 μ alta vel lata, saepe latiora quam altiora, plerumque plus minus distincte bilobata (lobis crassis obtusis), ad basim saepe stipitiformiter contracta; thyriothecia conferta, subglobosa, 100-150 μ diam., radiatim ex hyphis 3-3,5 μ crassis, olivaceo-brunneolis, contexta, mox mucosa dissoluta et usque ad marginem aperta; asci ovati vel ovato-globosi, aparaphysati, 40-60 × 35-40, octospori; sporae oblongae, medio vel paullo supra septatae, constrictae, utrinque rotundatae, primitus aureae, maturae, aterrimae, opacae, 24-27 × 11-12, loculo superiore plerumque leniter latiori sed breviore.

Hab. in foliis Modeccae (Adeniae) coccineae (Passifloraceae), Bataan, Luzon Ins. Philipp. (M. RAMOS).

SYMPHASTER Theiss. et Syd., Ann. Mycol. XIII, 1915, p. 217 et 668, 4927 XV, 1917, p. 418. — Mycelium hyphopodiatum. Thyriothecia scutata radiantia, polyasca; asci in foculis plurimis stromate hyalino-

fibroso divisis congregati, ovoidei, aparaphysati. Sporidia brunnea didyma. — Typus generis Symph. Gesneraceae (P. Henn. ut Cocconia) Th. et Syd.

## Sect. 3. Phaeodidymae

- \*) LEMBOSIA Lev. Syll. II p. 741, IX p. 1104, p. 387, XIV p. XIV p. 712, XVI p. 663, XVII p. 897, XXII p. 561.
- 1. Lembosia Rolliniae Rehm in herb., Theissen, Ann. Mycol. XI, 1913, 4928 p. 442. Peritheciis minutissimis  $0.3-0.35 \times 0.1$  mm.; mycelio pallide brunneo, ex hyphis 5  $\mu$  cr. crasse tunicatis, hyphopodiis sparsis irregulariter globosis, 5-7  $\mu$ , praeditis efformato; ascis e ovoideis,  $50-60 \times 30$ , cylindraceo clavatis,  $65 \times 25$ , parce paraphysatis; sporidiis atro-brunneis  $24-26 \times 10-11$ , levibus, loculis subinaequalibus.

Hab. in Rollinia sp. (Anonaceae), in Brasilia merid. (ULE).—Proxima Lemb. Warscewicziae P Henn.

2. Lembosia Pothoidei Rehm, Ascomyc. Philipp. I, in Philipp. Journ. 4929 of Sci. VIII (1913) p. 191. - Mycelio epiphyllo, effuso, arachnoideo, arcte adnato, ex hyphis fuscis, septatis, 5 µ cr., ramosis, hyphopodia pauca subglobosa 1-cellularia 7-8 µ cr gerentibus formato, plagas nigritulas usque ad 2 cm. diam., orbiculares, centro demum peritheciis creberrimis obsessas, ambitu vix conspicuas figurante; peritheciis primitus sparsis, dein plus minusve arete congregatis, atris, carbonaceis, glabris, raro orbicularibus, plerumque elongatis, utrinque obtusis, rectis, 400-500 µ longis, 300 µ latis, apice longitudinaliter vel stellatim rimose dehiscentibus, pseudoprosenchymatice centrifuge contextis, radiatim in mycelium basale transcuntibus; ascis ovoideis, crasse tunicatis, ca. 80 × 40, octosporis; paraphysibus nullis nisi stratum intermedium hyalinum; sporidiis ovoideis. medio aut paullulum inferius septatis, subconstrictis, hyalinis dein brunneis, 25-27 \* 12. Adsunt conidia obionga recta vel subcurvata, continua, fusca, 30 × 67, ut in Lembosia Cassupae P. Henp.

Hab in foliis Pothoidei (Araceae), Luzon, Prov. Laguna, Mt. Maquiling, ins. Philipp. (C. F. Baker). — Affinis L. decalvanti

<sup>&</sup>quot;) Caracteres gen. secundum THEISSEN (Lembosia-Studien, Ann. Mycol. XI, 1913, p. 427); Mycelium superficiale, hyphis ramosis, septatis hyphopodiatis. Thyriothecia dimidiato scutata, inversa (nucleo anatrop.), radiato-prosenchymatica, stratosa, typica oblongo linearia, rima longitudinali irregulari dehiscentia. Asci paraphysati, octospori. Sporidia phaeodidyma.

Pat. a qua forma et dispositione peritheciorum distinguitur.

3. Lembosia Heptapleuri Sacc., Notae Mycol. XXIV p. 14 (Bull. Orto 4980 botan. Nap. 1918). — Peritheciis epiphyllis, superficialibus, laxe gregariis undique versis, mycelio subcuticulari parco suffultis, anguste lanceolatis v. sublinearibus, 300-1000 \* 100-120, nigris, rima angustissima longitudinali dehiscentibus, toto ambitu ad basim hyalino-denticulatis; ascis dense parallele stipitatis, paraphysibus apice brunneo-grunosis obvallatis, tereti oblongis, circ. 40 \* 12, octosporis; sporidiis oblique monostichis, oblongis, utrinque rotundatis, medio constricto 1-septatis, 16 \* 5, diu hyalinis, dein fuscis.

Hab. in foliis morientibus, e subiculo innato leviter atratis, H e pta p l e u r i sp. culti (Araliaceae), Singapore (BAKER).

4. Lembosia modesta Theissen, Ann. Mycol. XI, 1913, p. 511. — Hy- 4931 phis mycelii irregulariter radiantibus, laeticoloribus, tenerrimis, 3 μ cr., alternis laxe ramosis; hyphopodiis sparsis minutis globosis, 5-6 μ diam.; thyriotheciis elongatis, 170-250 × 60-90. inversis, radiatis, hyphis fuligineo-brunneis delicatis 2-3 μ cr. contextis, opacis; ascis ovoideis 30-40 × 20-24, octosporis; sporis brunneis, laevibus utrinque rotundatis, 12-14 × 7, medio septatis et constrictis; paraphysibus filiformibus, ascos superantibus, non conglutinatis, apice vix incrassatis.

Hab. hypophylla in foliis Araucariae brasiliensis (Coniferae), Serra Geral, Brasiliae (ULE). — Soc. Pseudomeliola brasiliensi Speg. Affinis Lemb. microtheceae Theiss. a qua differt forma hyphopodiorum et modis sporarum.

5. Lembosia glonioidea Sacc., Notae Mycol. XXIV p. 15 (Bull. orto bot. 4932 Napoli 1918). — Peritheciis dense gregariis, lanceolatis, atris, membranaceis, simplicibus, non raro 2-3-radiatis, diu epidermide subtectis, demum erumpenti-subsuperficialibus, 330-600 × 90, laciniis epidermidis limitatis, latiuscule rimosis; ascis tereti-clavatis, apice rotundatis, brevissime stipitatis, 45-50 × 6-6,5, pseudo-paraphysibus epithecium fuscellum formantibus; sporidiis oblique monostichis, oblongis, 8-9 × 3, constricto-1-septatis, dilute fuligineis, loculo superiore paullo crassiore et obtusiore.

Hab. in ramulis emortuis subputrescentibus, corticatis Heve a e brasiliensis (Euphorbiaceae) cultae, Singapore (BAKER). — Asci marginales minores, inanes, paraphysioidei. Subiculo deficiente v. obsoleto ad gen. Lembosinam neotericorum spectaret. Videretur quoque Glonium minutum phaeodidymum.

6. Lembosia decolorans H. et P. Sydow, Ann. Mycol. XII, 1914, p. 561. — 4933

Epiphylla, matricem decolorans et maculas orbiculares v. confluendo irregulares 3-10 mm. diam. fuscidulas efficiens; mycelio perparco, vix visibili, ex hyphis tenuibus 3-4  $\mu$  latis ramosis parce hyphopodiatis composito; hyphopodiis subglobosis, continuis, 4-5,5  $\mu$  longis; thyriotheciis paucis in quaque macula, elongatis, 300-450  $\mu$  long. 140-170  $\mu$  latis, atris, opacis, ex hyphis, ca. 3-4  $\mu$  crassis radiatim compositis, tandem rima lata apertis; ascis ovato-oblongis, copiose paraphysatis, superne crasse tunicatis, 40-55  $\times$  16-22, octosporis; sporidiis oblongis, utrinque rotundatis, medio septatis et non v. vix constrictis, ex hyalino fuscidulis, levibus, 13-16  $\times$  5,5-7, distichis usque tristichis.

Hab. in foliis Quercus ovalis (Fagaceae), Sampaloe pr. Bulacan, Ins. Philippin. (M. RAMOS), in consortio Trichothyrii orbicularis Syd.

7 Lembosia nervisequa Syd., Philipp. Journ. of Sc. Bot., IX, 1914, 4934 p. 183. — Amphigena, praecipue nervos sequens, plagulas atras plus minus elongatas confluentes formans; mycelio parco, ex hyphis fuscis vix septatis 5-7 μ crassis anastomosantibus flexuosis composito; hyphopodiis nullis vel saltem non visis; peritheciis densiuscule dispositis, primitus rotundatis 200-300 μ diam., dein elongatis 300-550 μ longis 150-180 μ latis, rima longitudinali dehiscentibus, contextu centrali atro-fusco opaco marginem versus fusco ex hyphis rectis 4-4,5 μ crassis (articulis 8-11 μ longis) composito; ascis globoso-ovatis, parce paraphysatis, 50-58 × 40-46, octosporis; sporidiis conglobatis, ellipsoideis, utrinque late rotundatis, medio 1-septatis, vix vel leniter constrictis, minutissime verruculosis, ex hyalino sordite olivaceis, 23-26 × 12-13.

Hab. in foliis vivis Litseae sp. (Lauraceae), Palawan, Taytay, Ins. Philipp. (MERRILL).

8. Lembosia hormosiana Sacc., Notae Mycol. XXIV p. 14 (Bull. Orto 4935 bot. Nap. 1918). — Epiphylla, tenuissima, superficialis; subiculo adpresso intricato-ramoso fuligineo, hyphis 3,5-4 μ cr., hyphopodiis oblongis, obtusis, 7-10 × 3, praeditis; peritheciis lanceolatis, applanatis, 235-400 × 90, nigris, longitrorsum latiuscule rimosis, ambitu ad basim pilis septulatis fuligineis 45 × 3-4 remotiusculis ornatis; ascis fasciculatis ovato-ellipsoideis subsessilibus 35-40 × 18-20, oligosporis, aparaphysatis; sporidiis conglobatis, obovatis, bilocularibus, constrictis, 16-17 × 6-6,5, diu hyalinis, dein brunneis, guttulatis, cellula super. paullo crassiore.

Hab. in foliis morientibus Hormosiae sumatranae cul-

tae (Leguminosae), Singapore (BAKER). — Perithecia innituntur hypothallo subradiato cellulis superne opacis.

Lembosia Melastomatum Mont. — Syll. II p. 742 — var. Puttemansii 4936
 G. Arnaud, Ann. École Nat. Agriculture Montpellier t. 16., 1918,
 p. 133. — A typo recedit sporidiis vix crassioribus, 27,5 × 13,5, nec
 28 × 12,5 et austoriis in parte intraepidermica minus inflatis.

Hab. in foliis Melastomataceae cujusdam, Aqua Branca prope Sao Paulo, Brasiliae (A. Puttemans). — var. Maublancii G. Arnaud, l. c. p. 134, tab. XIX. — A typo recedit austoriis tantum in epidermide sitis. — Hab. in foliis Melastomataceae cujusdam, Caraça Minas Geraes, Brasiliae (A. MAUBLANC).

10. Lembosia miconiicola G. Arnaud, Ann. École Nat. Agricult. Montpellier, t. 16., 1918, p. 131, tab. XVII et fig 20. — L. Melastomatum var. microspora Theissen, Lembosia Studien 1913, p. 438. —
Maculis nigris 2-3 mm. latis epiphyllis; mycelio externo stigmopodiis paucis globosis, unilocularibus donato, interno bene evoluto,
ramoso, austoriis coralloideis numerosis praedito; stromatibus magnitudine variabilibus, plerumque 0,5-0,8 mm., saepe confluentibus; ascis ovoideis ventricosis, octosporis contextu paraphysoideo
obvallatis; sporidiis bilocularibus brunneis, circ. 22 × 11,5.

Hab. in foliis Miconiae stenostachyae (Melastomataceae), Tarapoto Peru, America austr (E. ULE).

11. Lembosia Eugeniae Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 4938 of Sci. VIII (1913) p. 261. — Mycelio epiphyllo, plagas orbiculares 0,5-1,5 cm. latas, nigricantes, haud distincte marginatas, dilute cinereo-fuscidulas, arcte adnatas formante, demum late effuso; hyphis mycelii nudo oculo haud conspicuis, gracilibus, sparse utrinque ramosis, septatis, 3-4 μ cr., hyphopodia cylindracea, unilateralia, 2-cellularia, fusca, recta, 10 ≈ 2,5 gerentibus; peritheciis sparsis, sessilibus, atris, glabris, rectis, linearibus vel subfusiformibus, rimose dehiscentibus, 150-200 μ longis, 100 μ latis, centrifuge contextis, ad basim in mycelium radiantibus; ascis ovoideis, octosporis, filiformi-paraphysatis, 60 ≈ 30; sporidiis oblongis, utrinque rotundatis, rectis, medio septatis et constrictis, demum fuscis, 20-22 ≈ 8-9, halone mucosa 5 μ lata obductis.

Hab. in foliis Eugeniae (Myrtaceae), Luzon, Prov Laguna, Los Baños, ins. Philipp. (C. F. Baker). — Affinis L. decalvanti fm. Coccoli Pat.; differt characteribus mycelii et peritheciis omnino sparsis.

12. Lembosia microcarpa Syd., Ann. Mycol. XV, 1917, p. 248. — Pla-4939

gulas primitus orbiculares dein confluendo irregulares effusas formans, mycelium sat copiosum, ex hyphis undulatis 2,5-3,5  $\mu$  crassis remote septatis copiose ramosis fuscidulis haud hyphopodiatis nec nodulis compositum; thyriothecia laxe gregaria, minuta, sed elongata 200-400  $\mu$  longa, 50-100  $\mu$  lata, recta vel saepe curvata, rima longitudinali dehiscentia, contextu radiato opaco, ambitu hyphis 2-3  $\mu$  crassis iis mycelii similibus copiose fimbriata; asci ovati vel ovato-globosi, paraphysati, 23-27  $\approx$  16-20, octospori; sporae oblongae, utrinque rotundatae, medio septatae et vix vel leniter constrictae. fuscae, leves,  $11-14 \approx 4-5$   $\mu$ .

Hab. in foliis Calami sp. (Palmae), Bataan, Luzon, Ins. Philipp. (M. RAMOS).

Lembosia Pandani (Rostr.) Theiss., Ann. Mycol. XI, 1913, p. 457, 4940
 Asterina Pandani Rostr. — Sacc. Syll. XVII p. 881. — Syn. Lemb.
 Pandani Rehm, Ascom. Philippin. VII, in Leaflt. of Philipp. Bot.
 VIII, 1916, p. 2932.

Hab. in pag. sup. foliorum Pandani Copelandi emortuorum (Pandanaceae), Paete, ins. Philippin. (BAKER). — Perithecia initio circulari-oblongula, fere asterinacea, mox vero anguste lanceolata, 0,5 mm. longa, 100  $\mu$  lata, rimosa. Asci 28-30  $\times$  24-26, octospori; sporidia didyma, 20-22  $\times$  9-10, diu hyalina, dein mellea, tandem brunnea. — Lemb. Cocoes Rehm, forsitam modo matrice diversa. Etiam Lemb. crustacea (Cke.) Th. aegre distinguenda.

14. Lembosia Pavettae Theiss., Ann. Mycol. XI, 1913, p. 429, t. XX 4941 fig. 28. — Plagulis plerunque epiphyllis, nigris 1 mm. latis in mycelium laxum ramosnm periphaerice desinentibus; hyphopodiis brunneis sparsis, depresse subglobosis 5-7  $\mu$  cr.; peritheciis dense congregatis, superficialibus, ex hyphis radiantibus 4  $\mu$  cr. efformatis; ascis dense paraphysatis (paraphysibus ascos superantibus simplicibus v ramosis apice vix incrassatis), octosporis subclavatis usque 65  $\approx$  10-12, J. ope disco ascigero intense cyaneo paraphysibus flavobrunneis; sporidiis demum distichis, oblongis, 18-21  $\approx$  6-8, brunneis, loculo superiori plerumque breviori et latiori.

Hab. in foliis Pavettae in dicae (Rubiaceae), Peradeniya Ceylon (T. Petch). — var. luzonensis Syd., Ann. Mycol. XV, 1917, p. 249. — Epiphylla, plagulas minutas vel majores usque 1 cm. diam. formans; mycelium ex hyphis densissime intertextis, ramosis anastomosantibus saepe connatis brunneis irregularibus 3.5 μ crassis remote septatis formatum; hyphopodia parcissime evoluta, hemiglobosa, 5.7 μ diam.; thyriothecia gregaria, oblonga vel trigona aut

linearia, 300-600  $\mu$  longa, 180-250  $\mu$  alta, alte convexa, aterrima opaca, ex hyphis 2,5-3  $\mu$  latis contexta; asci ovato-oblongi, 35-50  $\approx$  20-25, octospori; paraphyses copiosissimae, hyalinae, ascos superantes, superne haud incrassatae; sporae oblongae vel oblongo-ellipsoideae, utrinque rotundatae, medio septatae et leniter constrictae, leves, ex hyalino fuscidulae, 18-21  $\approx$  7-9, cellula superiore saepe leniter latiore, sed breviore.

Hab. in foliis Pavettae sp. (Rubiaceae), Rizal Luzon, Ins. Philipp. (M. RAMOS).

15. Lembosia philippinensis Syd., Ann. Mycol. XV, 1917, p. 249. — Amphigena, plagulas orbiculares, usque 1 cm. diam. dein confluendo saepe irregulares formans; mycelium ex hyphis dense intricatoramosis fuscis 2,5-4 μ crassis remote septatis haud hyphopodiatis compositum; thyriothecia laxe gregaria, mox elongata, 250-600 μ longa, 150-190 μ lata, rarius trigona, rima longitudinali dehiscentia, radiatim contexta, contextu opaco, ambitu saepe parum fimbriata; asci ovati vel oblongo-ovati, 35-46 × 20-24, octospori; paraphyses copiose, ad apicem plerumque lenissime dilatatae; sporae oblongae, utrinque rotundatae, medio septatae et constrictae, leves, brunneae, 17-19 × 6-7.

Hab. in foliis Randiae (?) sp. (Rubiaceae), Bataan Luzon, Ins. Philipp. (M. RAMOS).

16. Lembosia Rubiacearum G. Arnaud, Ann. Ecole Nat. Agriculture 4943 Montpellier, t. 61., 1918, p. 135, tab. XX. — Maculis epiphyllis parum visibilibus, 2-3 mm. diam.; mycelio externo parum eopioso stigmopodiis globosis v. plus minus deformibus praedito; mycelio interno austoriis racemosis epidermicis donato; stromatibus ellipsoideis 400  $\mu$  circ. long.; ascis ovoideis; sporidiis 21,5  $\times$  14,5, bilocularibus, brunneis.

Hab. in foliis Rubiaceae cujusdam, loco?, America merid. (ULE).

17. Lembosia inconspicua Syd., Philipp. Journ. of Sc., Bot., IX, 1914, 4944 p. 183.— Epiphylla, plagulas tenuissimas vix conspicuas 2-8 mm. latas formans; mycelio ex hyphis dilute fuscis dense ramosis septatis irregularibus 3-4 μ crassis composito; hyphopodiis rarissimis, continuis, brevissimis; peritheciis sparis vel laxe aggregatis, anguste oblongis usque linearibus, plerumque 150-350 μ longis et 100-150 μ latis, subinde valde elongatis et tunc usque 1 mm. longis, tenuibus, rectis vel subrectis, opace, atris, rima longitudinali latiuscula apertis, contextu opaco atro ex hyphis tenuibus rectis

vel subrectis ca. 2  $\mu$  crassis composito; ascis ovatis, apice late rotundatis et incrassatis, sessilibus,  $26.32 \times 14.20$ ; paraphysibus copiosis, superne leniter incrassatis, obtusis, ad apicem 2.2,5  $\mu$  latis, hyalinis; sporidiis octonis, conglobatis, elongato ovatis, levibus, ex hyalino tandem fuscis, 11.15  $\times$  3,5.5, loculo superiore globuloso; inferiore angustiore et longiore, ad septum non vel vix constrictis.

Hab. in foliis Guioae sp. (Sapindaceae), Palawan Taytay, Ins. Philippin. (MERRILL).

- MAURODOTHELLA G. Arnaud, Ann. Ecole Nat. Agricult. Montpellier t. 16, 1918, p. 124 (Etym. a gen. Maurodothis quia affinis). A gen. Lembosia stigmopodiis et stigmocystis nullis tantum differt. Ex duob. subgen. sistit: Eu-Maurodothella Arn., sporidiis aequaliter brunneis, Maurodothina Arn. sporidiis brunneis sed duobus zonulis hyalinis donatis.
- 1. Maurodothella Psychotriae G. Arnaud, l. c. p. 125, tab. XIII. Ma-4945 culis parvis 1-2 mm. diam. epiphyllis (an semper?); mycelio externo parum visibile et copioso; stromatibus in centro macularum irregulariter dispositis quandoque distincte radiantibus 0,65-0,9 mm. long.; ascis ovoideo-oblongis, octosporis, contextu paraphysoideo copiose obvallatis; sporidiis bilocularibus obscure brunneis, 30 × 14,5-15. Mycelio externo brunneo, ramoso, stigmatocistis nullis; mycelio interno copioso, inter epidermide et mesophyllo orto, austoriis coralloideis praedito.

Hab. in foliis Psychotriae sp. (Rubiaceae), Rio Maña, America austr. (E. ULE).

- CIRSOSIA G. Arnaud, Ann École Nat. Agricult. Montpellier t. 16., 1918, 4946 p. 127. (Etym. e cirsos = varix, quia mycelio varicoso ex stigmocystis inflatis). Stroma ut in Lembosia; mycelio aereo brunneo, stigmocystis inflatis et filamentis donatis praedito, contextu paraphysoideo praesenti. Huc pertinet Lembosia manacensis P. Henn. et tunc Cirs. manacensis (P. Henn.) Arnaud vocanda.
- CIRSOSIELLA G. Arnaud, Ann. Ecole Nat. Agriculture Montpellier, t. 4947 16, 1918, p. 127. Est Cirsosia contextu paraphysoideo destituta. Gen. Morenoëlla etiam affine. Huc ducendae sunt sec. Arnaud: Morenoëlla transversalis (Syd.) Th., irregularis (Syd.) Th. nec non Lembosia globulifera Pat.

ECHIDNODES Theiss. et Sydcw, Ann. Mycol. XV, 1917, p. 422. — Est 4948

Lembosia exhyphopodiata. — Typ. gen. Echid. Litsurae (Cke. ut
Aulographum), E. baccharidincola (Rehm ut Lembosia) Th. et Syd.,
E. Bromaliacearum (Rehm) Th. et Syd., hypophylla Syd., Vrieseae
(v. Höhn. ut Lembosia) Th. et Syd. (= ? Micropeltis Vrieseae
Rehm).

ECHIDNODELLA Theiss. et Syd., Ann. Mycol. XV, 1917, p. 422.— Est Morenoëlla exhyphopodiata.

1. Echidnodella linearis (Syd.) Syd. in Th. et Syd., Ann. Mycol. XV, 4949 1917, p. 422, Morenoëlla linearis Syd., Ann. Mycol. l. c. p. 250.— Hypophylla, plagulas irregulares tenues saepe confluentes et plus minus effusas formans; mycelium copiose evolutum, ex hyphis copiose anastomosantibus varie ramosis undulatis fuscidulis 2,5-3 μ latis haud hyphopodiatis compositum; thyriothecia laxe aggregata, exacte linearia, ½ 1½ mm. longa, 100-150 μ lata, rima angustissima aperta, recta, curvata vel geniculata, opaca, radiatim contexta, ambitu copiose fimbriata et in mycelium abeuntia; asci clavati vel saccati, sessiles ad apicem rotundati et incrassati, 30 35 × 14-16, octospori, aparaphysati; sporae oblongae, angustae, circa medium 1-septatae, ex hyalino olivaceo-brunneae, 11-13 × 3-4.

Hab. in foliis Cynomatrae sp. (Leguminosae), Samar, Ins. Philipp. (M. RAMOS).

## MORENOELLA Speg. - Syll. IX p. 1094, XVI p. 653.

1. Merenoëlia Memecyli Syd., Philipp. Journ. of Sc., Bot., IX, 1914, 4950 p. 183. — Peritheciis hypophyllis, in mycelio parcissime evoluto ex hyphis ramosis vix vel parce septatis fuscidulis 3,5-4 5 μ crassis levibus composito haud hyphopodiato (hyphopodiis saltem non visis) insidentibus, superficialibus, primitus orbicularibus, tandem elongatis, 200-450 μ longis, 120-160 μ latis, plerumque rectis, rima latiuscula dehiscentibus, contextu opaco ex hyphis radiantibus obscure brunneis 3-3,5 μ crassis crebre septatis (articulis 7-9 μ longis) composito; ascis subglobosis vel ovatis, rarius leniter elongatis, aparaphysatis, 35-55 μ longis, 26-35 μ latis, octosporis; sporidiis oblongis, utrinque rotundatis, medio 1-septatis, leniter constrictis, levibus, ex hyalino fuscis, 20-23 μ longis, 8-10 μ latis, cellula su periore parum latiore quam inferiore.

Hab. in foliis Memecylonis lanceolati (socio Dictyothyrio giganteo Speg.), Palawan, Taytay, Ins. Philipp. (MEREILL).

2. Morenoëlla Anisopterae H. et P Sydow, Ann. Mycol. XII, 1914, p. 4951 560. — Epiphylla, plagulas orbiculares 3-10 mm. diam. formans; mycelio laxo, ex hyphis obscure brunneis 6-8,5 μ latis rectis opposite ramosis nodos gerentibus composito; nodis crassis, hemisphaerice prominentibus, 10-14 μ diam.; thyriotheciis laxe gregariis, ex rotundato mox ellipticis usque linearibus, 500-800 μ long. 350-450 μ latis, alte convexis, ambitu plus minus fimbriatis, opacis, ex hyphis rectis 4-5,5 μ crassis (articulis 10-14 μ long.) composito; ascis globosis usque ovatis, aparaphysatis, oct sporis, 45-65 × 35-50; sporidiis medio v. infra medium septatis, non v. parum constrictis, brunneis, 28-36 × 17-20, levibus, loculis aequalibus v. superiore leniter majore.

Hab. in foliis Anisopterae thuriferae (Dipterocarpaceae), prov. Rizal, Ins. Philippin. (M. RAMOS).

3. Morenoëlla anisocarpa H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4952 559. — Epiphylla, plagulas rotundatas 2-8 mm. latas efformans; mycelio ex hyphis radiantibus ramosis anastomosantibus obscure brunneis 6-8 μ crassis haud hyphopodiatis sed nodos gerentibus composito; nodis hemisphaericis v. globosis, 10-15 μ diam.; thyriotheciis densiuscule dispositis, primitus rotundatis et 350-500 μ diam., taudem elongatis 500-1000 μ longis, 250-350 μ latis alte convexis, opacis, ex hyphis 4-5 μ latis composito, ambitu fimbriatis; ascis globosis v. ovato-globosis, 65-80 × 50 70, octosporis, aparaphysatis; sporidiis conglobatis, ovato-oblongis, ex hyalino sordide brunneis, levibus, infra medium septatis et leniter v magis constrictis, totis 36-40 μ longis, loculo superiore majore et latiore 22-26 × 20-24, inferiore minore, 12-16 × 16-20, plerumque latiore quam longiore.

Hab. in foliis Hopeae plagatae (Dipterocarpaceae), Angat prov. Bulacan, Ins. Philippin. (M. RAMOS). — Mor irregularis (Syd.) Theiss. proxima sed differt praecipue sporidiis inaequaliter septatis.

4. Morenoëlla Ramosi H. et P. Sydow, Ann. Mycol. XII, 1914, p. 560.— 4953
• Hypophylla, greges 0,5-1,5 cm. latos efformans; mycelio parco, radiante, ex hyphis opposito-ramosis, saepe anastomosantibus fuscis 4,5-6,5 μ latis hyphopodiis destitutis composito; thyriotheciis laxe ordinatis, ellipticis, oblongis v. subinde trigonis, opacis, marginem versus dilutioribus, convexis usque 1 mm. longis, 250-400 μ latis, contextu ex hyphis 4-6 μ latis (articulis 7-10 μ longis) rectis composito; aseis ovato-globosis, aparaphysatis, 50-75 × 40-60, 6-8-spo-

ris; sporidis conglobatis, ellipsoideis utrinque late rotundatis, medio 1-septatis et valde constrictis, minutissime verruculosis, in maturitate opace brunneis,  $32.38 \times 17.20$ .

Hab. in foliis Pentaemes contortae (Dipterocarpaceae), prov. Rizal, Ins. Philippin. (M. RAMOS).

5. Morenoëlla Bakeri Syd., Ann. Mycol. XV, 1917, p. 260. — Epiphylla, 4954 plagulas densas orbiculares vel irregulares 2-10 mm. diam. formans; mycelium densissime intertextum, ex hyphis obscure castaneo-brunneis 7-9 μ crassis copiose breviterque ramosis anastomosantibusque septatis compositum; hyphopodia ad hyphas dense intertextas tantum copiose evoluta, hemisphaerico-globosa, continua, integra, 15 20 μ diam., thyriothecia circinatim denseque disposita, primitus orbicularia, dein oblonga, 400-700 μ longa, 200-320 μ lata, radiatim ex hyphis rectis 4-5 μ crassis opacis contexta, ad ambitum hyphis 7-9 μ crassis fimbriata, rimose dehiscentia; asci paraphysati, globosi vel ovato-globosi 60-70 × 45 65, octospori; sporae ellipsoideae vel ovatae, utrinque late rotundatae, medio, vel paullo infra medium septatae, vix vel leniter constrictae, leves, sordide olivaceo-brunneae, 34-42 × 18-24.

Hab. in foliis Shore are sp. (Dipterocarpaceae), pr. Paete, Laguna, Ins. Philipp. (C. F. BAKER).

6. Morenoëlla Beilschmiediae H. S. Yates, Philipp. Journ. Sc. XII, 4955 (1917) p. 373. — Hypophylla, plagulae totum folium plus minusve occupantes; mycelio parcissime evoluto. ex hyphis radiantibus ramosis anastomosantibus brunneis 3.5  $\mu$  crassis composito, peritheciis numerosis, primitus orbicularibus, tandem elongatis, 400-600  $\times$  100-150, rima latiuscula dehiscentibus, contextu ex hyphis radiantibus obscure brunneis 3.5  $\mu$  latis composito; ascis ovatis, 36-45  $\times$  25-30, octosporis; sporidiis oblongis, utrinque rotundatis, medio 1-septatis, vix constrictis, laevibus, hyalino-fuscis, 25-30  $\times$  6-7, cellula superiore parum latiore quam inferiore.

Hab. in foliis Beilschmiediae nervosae (Lauraceae), Catubing River, Samar, Ins. Philipp.

7. Morenoëlla lagunensis H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4956 560. — Epiphylla, maculas atras orbiculares 0,6-1 cm. diam. formans; mycelio radiante, ex hyphis obscure brunneis reticulatoramosis 5,5-7 μ crassis composito; hyphopodiis paucis, clavato-capitatis, alternantibus, 13-15 μ long., cellula basali brevi, superiore late rotundata 9-11 μ lata, concoloribus; thyriotheciis numerosis in quaque plagula, oblongis usque linearibus, 250-500 μ long.

120-200  $\mu$  latis, opacis, rima longitudinali dehiscentibus, ex hyphis obscure brunneis ca. 4,5-5  $\mu$  cr. prosenehymatice radiatim contextis, ambitu fimbriatis; ascis aparaphysatis, ovatis,  $40-50 \times 28-35$ , octosporis; sporis oblongis, medio 1-septatis et constrictis, ex hyalino brunneis, levibus,  $20-23 \times 10-11$ .

Hab. in foliis Neolitseae sp. (Lauraceae), Mt. Maquiling prov. Laguna, Luzon, Ins. Philippin. (P. W. GRAFF).

8. Morenoëlla Fagraeae Syd., Ann. Mycol. XV, 1917, p. 251.— Plagulas 4957 epiphyllas irregulares tenues parum perspicuas usque 1 cm. latas formans; mycelium parum evolutum, ex hyphis brunneolis tenuibus 2,5-3,5 μ crassis ramosis haud hyphopodiatis compositum; thyriothecia laxe disposita, recta vel flexuosa, linearia, 400-800 μ longa, 100-150 μ lata, rima longitudinale dehiscentia, contextu atro opaco ex hyphis 3-4 μ crassis composito; asci oblongi vel clavulati, aparaphysati, apice incrassati, 28-35 × 13-16, octospori; sporae distichae, oblongae, utrinque rotundatae, fuscae, leves, medio septatae et leniter constrictae, 12-14 × 4,5-5,5.

Hab. in foliis Fagraeae racemosae (Loganiaceae), San Antonio, Laguna, Luzon, Ins. Philipp. (M. RAMOS).

9. Morenoëlla samarensis Syd., Ann. Mycol. XV, 1917, p. 250. — E- 4958 piphylla, plagulas minutas orbiculares 1-3 mm. diam. formans; mycelium parce evolutum, ex hyphis taxe ramosis anastomosantibusque brunneis 4 μ crassis compositum; hyphopodia rara, solitaria, continua, integra vel subinde leniter lobata, saepe depressa, 5-7 μ lata; thyriothecia gregaria, oblonga vel linearia, 250-800 μ longa, 150-200 μ lata, radiatim et hyphis 2,5-3 μ crassis omnino opacis contexta, ambitu hyphis similibus sed flavo-brunneis plerumque copiose fimbriata, rima angusta aperta; asci aparaphysati, ovato-oblongi vel oblongi, ad apicem crasse tunicati, 38-44 × 20-24, octospori; sporae oblongo-ovatae, utrinque rotundatae, medio septatae, leniter constrictae, leves, in maturitate fuscae, 16-18 × 6-7.

Hab. in foliis Stephaniae sp. (Menispermaceae), Catubig River, Samar, Ins. Philipp. (M. RAMOS).

10. Morenoëlla Mollinediae G. Arnaud, Ann. Ecole Nat. Agriculture 4959 Montpellier t. 16., 1918, p. 137., tab. XXI. — Lembosia Myrtacearum Theiss. nec Speg. — Maculis epiphyllis 1-2 mm. diam.; mycelio externo parum copioso alterne ramoso et stigmopodiis plerumque alterne dispositis elongatis saepe contortis praedito; austoriis racemosis; stromatibus 400 μ long., saepe confluentibus et tunc longioribus, parietibus tenuibus donatis; ascis ovoideis, contextu

paraphysoideo nullo; sporidiis bilocularibus brunneis, angustis,  $17 \times 6.5$ .

Hab. in foliis Mollinediae elegantis (Monimiaceae), Sao Leopoldo, Brasiliae (RICK, Fungi austro-americani n. 262).

11. Morenoëlia tenuis H. et P. Sydow, Ann. Mycol. XII, 1914, p. 560.— 4960 Epiphylla, plagulas orbiculares v. irregulares saepe parum definitas formans; mycelio parco, ex hyphis undulatis obscure brunneis 4-5 μ crassis anastomosantibus composito; hyphopodiis modice numerosis, plerumque alternantibus, rarius oppositis, cylindraceis, 10-13 μ longis, 4,5-5,5 μ latis, rectis v. cellula superiore leniter curvata, obtusis; thyriotheciis laxe aggregatis, linearibus, 400-800 μ long. 150-200 μ latis, alte convexis, opacis, contextu ex hyphis flexuosis 3-3,5 μ crassis composito; ascis primitus ovato-globosis et 35-40 × 30-35, dein crasse cylindraceis usque 75 μ longis 25-30 μ latis, octosporis, aparaphysatis; sporidiis ellipsoideo-oblongis, utrinque rotundatis, medio septatis et constrictis, brunneis, levibus, 23-26 × 10-12.

Hab. in foliis Eugeniaesp. (Myrtaceae), Angat prov. Bulacan, Ins. Philippin. (M. Ramos).— Mor. Myrtacearum Speg. proxima sed hyphopodiis obtusioribus et brevioribus sporidiis majoribus praecipue diversa.

MORENOINA Theiss., Ann. Mycol. 12., 1913, p. 434; 15., 1917, p. 417.— 4961 Est Morenoëlla mycelio distincto superficiale destituta. — Typ. gen. Mor. antarctica (Spegaz.), nec non verisimiliter, australis (Speg.), microscopica (Speg.), Curatellae Starb., Lembosia lucens (Harku.). etc.

SEYNESIELLA G. Arnaud Ann. Ecole Nat. Agricult. Montpellier, t. 16., 4962 1918, p. 202, tab. XLV (Etym. e Seynesia cui analogum gen.). — Rhizomatica; stroma cum mycelio interno hic inde connexo; asci erecti, contextu paraphysoideo; sporidia bilocularia, brunnea. Spec. typica Seyn. Juniperi (Desm. in Dothidea) G. Arnaud.

# Sect. 4. Hyalophragmiae

HALBANIELLA Theiss., Ann. Mycol. XIV, 1916, p. 430. — Theiss. et 4963 Syd., l. c., XV, 1917, p. 421. — Mycelium liberum superficiale, sep tatum, brunneum, radians, exhyphopodiatum. Thyriothecia superficialia inversa, radiato-contexta, dimidiata. Asci parce paraphysati, octospori, clavati. Sporidia hyalina, levia, 4-5 locularia. — Typ. gen.

Halbaniella javaniea (Rac. ut Heterochlamys) Theiss. l. c. — Verisimiliter huc spectat etiam Zignoëlla ovoidea Sacc., sec. v. Höhnel, Ann. Myc. XVIII, 1920, p. 79.

- pothithyrella v. Höhnel, Ann. Mycol. 16., 1918, p. 171. Hypo- 4964 stroma in cellulis epidermicis nidulans, brunneum; hypostroma ascigerum superficiale, tenue hinc inde adnatum; mycelium liberum nullum. Loculi rotundati v. depressi stratu proprio scutiforme brunneo tecti et stratu basali hyalino praediti. Pars stromatica sterilis e cellulis seriebus parallele dispositis efformata. Paraphyses filiformes, saepe nullae. Asci ovoidei, octospori. Sporidia 2-4 locularia, hyalina. Typus gen.: Doth. litigiosa (Desm.) v. H. Microthyrium litigiosum (Desm.) Sace.
- PARAPELTELLA Spegazz., Rel. myc. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 143-144 (Etym. a para proximum et Peltella). A gen. Micropeltella Syd. (ad species ab initio rotunde ostiolato-perforatas reductum) differt thyriotheciis astomis senectute tantum medio radiatim dehiscentibus.
- 1. Parapeliella macrosperma Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. 4965 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 143. Maculae nullae sed matrix tota conspicue infuscata; subiculum plane nullum; thyriothecia sparsa minuta 100-150 μ diam. atra, astoma sed per aetatem centro minute stellatim dehiscentia, glabra, coriacella, contextu indistincto, ambitu vix hyalino-marginata ac hyphis nonnullis subreticulatis appendiculata: asci obovati, apice rotundati crassissime tunicati, basi in pedicello brevi crassoque attenuati, aparaphysati, 6-8-spori, 50-60 × 20-25; sporae elongato-subclavulatae utrinque rotundatae, leniter arcuato-inaequilaterales, transverse 9-11-septate, ad septa non constrictae, primo hyalinae demum subchlorinae, 30-40 × 6-7.

Hab. ad folia viva ! Acanthocarpi sp. (Liliaceae), in silvis prope Apiahy, Brasilia (J. Puiggari).

2. Parapeltella mediocris Spegaz., Fungi Costaric. nonn., in Bol. Ac. 4966 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 214, cum icon. — Maculae nullae; thyriothecia laxissime gregaria v. sparsa, mediocria 200-300 μ atra glabra opaca astoma, sed centro minute stellatim dehiscentia, ambitu vix denticulato, non hyalino-marginata, contextu dense minuteque parenchymatico; asci obclavulati, obtusi brevissime crasseque pedicellati omnino aparaphysati, saepius te-

traspori,  $60-65 \times 18$ ; sporae mediocres lineari-subclavulatae tetramerae hyalinae,  $30 \times 5-7$ .

Hab. ad folia viva Myrtacea e ignotae, prope S. Josè Costarica, America trop.

ACTINIOPSIS Starb. - Syll. XVI p. 543, XVII p. 871, XXII p. 530.

1. Actinionsis Rickii Theiss., Broteria, Bot. v. XII, 1914, fasc. I, p. 26. 4967 Stromata laxe gregaria nigra, cylindrico-globosa, 170-200 µ diam. fascientis setarum 8-15 supra ornata. Asci ad basim perithecii fasciculati elongati, cylindracei, octospori, 80-90 × 13-16. Paraphyses filiformes numerosae ascos superantes, tenerrime septatae, Sporae imbricate monostichae v. distichae, hyalinae, rectae vel curvulae, basi vel utringue acutatae, 30-35 × 4-5, transverse 5-7-septatae. Perithecia instructa sunt ostiolo irregulariter orbiculare margine dilacerato. Textura stromatis nigra, fere carbonacea; parietes peritheciales molliores, attamen tenaces, non carnosulae, hyphis tenerrimis, lacticoloribus, dense stipatis et indistincte parellelibus, fasciculi hypharum marginales basi ca. 85 µ lati 180-250 µ longi cuneatim attenuati, albescentes, ad basim ascellarem obscuriores. Saepe singuli fasciculi non distinguuntur, sed in coronam continuam coaliti discum circumdant, peripherice tantum serrato-incisi: hyphae fasciculorum griseo-viridulae ca. 3 µ crassae, singulae singulis dense appressae. Asci breviter stipitati, cylindrici: supra paullo angustati, apice rotundati (interiore tantum sacculo truncato). Iodi ope asci et paraphyses lutescunt.

Hab. epiphylla in foliis Orchideae epiphytae, Sao Leopoldo, Brasiliae merid. (BICK). — Actiniopsis violaceo-atra v. Höhn., huic speciei similis differt sporis multo longioribus.

# Sect. 5. Phaeophragmiae

AMAZONIA Theiss., Ann. Mycol. 11., 1913, p. 409; Theissen et Sydow; l. c. 15., 1917, p. 421.

Amazonia polypoda Syd., Ann. Mycol. XV, 1917, p. 145. — Peri-4968 theciis amphigenis in plagulas minutas 0,5-2 mm. diam., dense dispositis, facile secedentibus, superficialibus, orbicularibus, 350-450 μ diam., radiatim ex hyphis rectis, fuscidulis centro subopacis, 6-8 μ cr., septatis (articulis 15-20 μ long.) ad peripheriam pierumque clavato-dilatatis compositis, haud fimbriatis, centro pluristratosis, ad marginem unistratosis; mycelio ex hyphis radiantibus, lon-

giusculis, regularibus, rectis, fuscis, 8-9  $\mu$  cr.; laxe ramosis composito; hyphopodiis capitatis copiosissimis, longa serie alternantibus, subcylindraceis v. oblongo-ovoideis, clavato-stipitatis; semper integris, rotundatis,  $15-20 \times 10-12$ , cellula basali brevissima, saepe vix conspicua; hyphopodiis mueronatis multo rarioribus alternatis v. oppositis, superne subtenuatis,  $16\cdot 22 \times 9-11$ , ascis bisporis,  $50-60 \times 20-25$ ; sporidiis oblongis, utrinque rotundatis ad septa constrictis, fuscidulis,  $35-42 \times 14-18$ , loculis fere aequalibus v. extimis paullo minoribus.

Hab. in foliis Straussiae Marinianae (Rubiaceae), Oahn, Ins. Sandwicensium (H. L. Lyon). — Affinis Amazon. psychotricolae (P. Henn.) Theiss.

PATOUILLARDINA Arnaud, C. R. Ac. d. Sc. Paris, t. 159, 1917, p. 890.— 4969
Mycelium externum stigmopodiis praeditum et perithecios externos
generans; paraphyses nullae; asci erecti, paralleli, ellipsoidei v.
ovoidei; sporae brunneae pluries transverse septatae.— Huc ducenda est Meliola clavispora Pat.

# Sect. 6. Phaeodictyae

YATESULA Syd., Ann. Mycol. XV, 1917, p. 237 (Etym. a cl. H. S. YATES fungi detectore).— Membranae superficiales pseudoparenchymatice contextae, atro-brunneae, ad marginem radiantes, sed mycelio proprio libero fere destitutae; hymenia pluria, ubique evoluta, polyascigera; asci clavati, 4-8-spori paraphysati; sporae muriformes, roseolae.

1. Yatesula Calami Syd., l. c. p. 237. — Membranae amphigenae sparsae vel inde binae trinae aggregatae et confluentes, rotundatae, 1-2 mm. diam., superficiales, atro-brunneae ad marginem radiantes subpellucidae ex hyphis 2,5-3 µ crassis contextae, centro plerumque opacae subatrae, hypothecio fibroso, roseolo; hymenia pluria in quaque membrana evoluta, ubique dispersa, polyascigera; asci clavati vel cylindraceo-clavati, breviter tenuiterque stipitati, superne rotundati, 4-8-spori, indistincte paraphysati, 35-55 × 9-12; sporae plerumque distichae, oblongae vel clavulatae, 3-4 septatae, ad septum medium saepe leniter constrictae, utrinque rotundatae vel ad basim leniter attenuatae, 10-13 × 2,5-3,5, pallide roseolae, praecipue in ascis, cellula una alterave (praecipue apicali) subinde oblique vel horizontaliter septatae.

Hab. in foliis Calami sp. (Palmae), Rizal, Luzon, Ins. Philipp. (H. S. YATES).

# Subfam. 4. Trichothyrieae

Dispositio systematica Generum secundum v. Theissen l. c.

Trichothyriaceae Theise., Beih. Bot. Centralbl. Abt. II, 32., 1914

H. 1. — Theiss. et Sydow, Ann. Mycol. XV, 1917, p. 484; v. Höhnel, Ber. d. Dentsch. Bot. Ges. 35., 1917, pp. 411-416, 2 fig.

- I. Thallo copiose evoluto
  - a) Speridia hyalodidyma
  - b) Sporidia phaeodidyma
- c) Sporidia hyalophragmia
- II. Thallo nullo
  - a) Sporidia hyalodidyma
  - b) Sporidia hyalophragmia

TRICHOTHYRIUM Speg.

TRICHOTHYRIELLA Theiss
TRICHOTHYRIOPSIS Theiss.

LORANTHOMYCES V. H. ACTINOPELTIS V. H.

TRICHOTHYRIUM Speg. — Syll. IX p. 1062, XXII p. 521 — Syn. Trichopeltopsis v. Höhn., Fragm. z. Mykol. VII, 1909, n. 325.

1. Trichothyrium orbiculare Syd., Enum. Philipp. Fungi II, in Philipp. 4971 Journ. of Sci. VIII (1913) p. 492, fig. 2.— Hypophyllum, in mycelio Meliolae parasiticum, mycelio hyphas Meliolae omnino amplectente et pelliculam tenuem fere continuam efformante, ex hyphis obscure olivaceo-fuscis, ramosis et anastomosantibus, vix vel parce septatis, 2-3 µ latis (permultis tenuioribus et pallidioribus subhyalinis interjectis) composito; hyphopodiis nullis; peritheciis radiatim oriundis, dense stipatis, ambitu omnino circularibus, 125-150 µ diam., atris, dimidiato scutatis, centro ostiolo rotundo 15-25 u lato distincto praeditis, contextu obscure fusco, saepe subopaco, centro dilutiore, amoene radiatim ex hyphis 2,5-3 µ latis fuscis composito; ascis ovato-oblongis vel oblongis, sessilibus, apice rotundatis, non vel leniter incrassatis, octosporis, aparaphysatis, 35-50 × 15-18; sporidiis distichis, subinde tristichis, ovato-oblongis, medio 1-septatis, non vel leniter constrictis, hyalinis, 14-17 × 3-4,5, cellula superiore latiore.

Hab. in mycelio Meliolae ad folia Heliciae sp. (Proteaceae), Luzon, Subprov. Ifugao, Mt. Polis, ins. Philipp. (Mc. Gre-GOE). — Specimina immatura videntur; an sporidia demum pluriseptata?

2. Trichothyrium iquitosense F. Theissen, Verh. zool ·bot. Ges. 69., 1919, 4972 p. 22. — Epiphyllum, ad mycelium Chaetosphaeriae et Meliolae adnatum. Mycelium proprium parce evolutum ex hyphis pallidis exhyphopodiatis, reticulato-ramosis, 3 μ cr. efformatum. Peritheciis confertis, arescendo discoideo-applanatis, centro papillatis nigris opacis, levibus, 150-170 μ latis, non dimidiatis, contextu radiato-efformatis; ascis clavatis v. subcylindraceis, 28-38 × 9-10, parce paraphysatis, breviter pedicellatis, supra rotundatis, octosporis; sporidiis distichis, hyalinis, 7-8 × 2,5, uniseptato-constrictulis, loculo super. subrotundato, inferiori cylindraceo.

Hab. in foliis Palmae cujusdam, Iquitos Rio Amazonas, Brasilia.

- TRICHOTHYRIELLA Theiss., Beih. Bot. Centralbl. 32., 1914, p. 4. 4973
  Theiss. et Sydow, Ann. Mycol. XV, 1917, p. 488. Thallo filamentoso irregulariter floccoso. Paraphyses nullae. Sporidia bilocularia brunnea. Caeterum ut in Trichothyrio. Typ. gen. Trich. quercigena (Berk.) Th.
- TRICHOTHYRIOPSIS. Theiss., Beih. Bot. Centralbl. 32., 1914, p. 4. 4974
  Theiss. et Sydow, Ann. Mycol. XV, 1917, p. 488 A Trichothyrio
  differt sporidiis hyalophragmiis. Typ. gen. Tr. densa (Bac.) Th.
  1. c., Tr. sexspora (Starb.) Th. et Tr. juruana Theiss.
- LORANTHOMYCES v. Höhn., Fragm. z. Myk. VII, 1914, n. 310, Ber. 4975 d. Deutsch. Bot. Ges. 1917, p. 414. Theiss. et Sydow, Ann. Myc. XV, 1917, p. 488. Thallo nullo v. evanido. Perithecia in fungis stromaticis nidulantia. Caeterum ut in *Trichothyrio*. Paraphyses nullae. Typ. gen. Lor. sordidulus (Lev.) v. Höhn. l. c., L. epimyces (B. R. S.) v. Höhn.
- MYCCLANGLOISIA G. Arnaud, Ann. École Nat. Agricult. Montpellier, t. 16., 1918, p. 157 (Etym. a bot. A. B. Langlois). A Gen. Trichothyrium Speg. 1889, stromatibus circa ostiolum setulis erectis ornatis tantum differt.
- Mycolangloisia echinata G. Arnaud, l. c., tab. XXVII. Stromatibus depresse conoideis margine non fimbriatis 150-170 μ diam., circa ostiolum setulis 8-12, brevibus, 40 μ, brunneis acutis ornatis; sporidiis fusoideis bilocularibus hyalis (an semper ?), 25 × 5, medioconstrictulis; mycelio externo incoloro, ramoso-intricato, septulato.

Hab. parasiticum in mycelio? Parodiopsidis sp. in foliis R u b i ace a e cujusdam, Brasilia, America austr. (E. ULE).

# Subf. 5. Trichopelteae

Caracteres et dispositio system. Gen. sec. v. Theissen.

Trichopeitaceae Theissen, Centribl Bakt. II Abt. 39. (1913) p. 629
Theissen et Sydow, Ann. Mycol. 15., 1917, p. 425.

Thallus vegetativus superficialis, membranosus, radiato prosenchymaticus. Loculi ascigeri in ipso thallo pycnotice transformato evolvuntur, peltati, ostiolo demum irregulari aperti.

- A. Thallus linearis vel vittaeformis, ramosus TRICHOPELTINEAE Theiss.
  - I. Sporidia 2-locularia
    - 1. Sporidia hyalina
    - 2. Sporidia colorata
  - II. Sporidia 3-locularia, hyalina
  - III. Sporidia 4-plurilocularia hyalina
- B. Thallus rotundatus, confluens
  - I. Sporidia 2-locularia, hyalina
  - II. Sporidia 2-locularia, colorata

TRICHOPELTINA Theiss.

TRICHOPELTELLA v. Höhn.

TRICHOPELTIS Speg.

TRICHOPELTULA Theiss.

BREFELDIINEAE Theiss.

BREFELDIELLA Speg.

Pycnocarpon Theiss.

- TRICHOPELTINA Theiss., Centribl. Bakt. II Abt., 39. (1913) p. 630; 4977 Theiss. et Sydow, l. c. p. 426. Thallus superficialis, vittaeformis, ramificatus, radiato-prosenchymaticus. Pycnothecia in thallo formata, centro demum irregulariter pertuso (ostiolo non typico). Asci aparaphysati. Sporae hyalodidymae.
- T. Labecula (Mont.) Theiss. Asterina Labecula Mont. Sacc. Syll. I, p. 44.
- T. chilensis (Speg.) Theiss. Trichothyrium ch. Speg. Syll. XXII p. 521.
- TRICHOPELTELLA v. Höhn. Theiss., loc. cit. p. 632. Theiss. et 4978 Syd., l. c. p. 426. Est Trichopeltina sporidis phaeodidymis.
- T. montana (Rac.) v. Höhn. Trichopeltis montana Racib. Sacc., Syll. XXII p. 524 [sub Seynesia].
- TRICHOPELTULA Theiss., Centrlbl. Bakt. II Abt. 39. (1913) p. 636.—
  Theiss. et Sydow, l. c. p. 427. Ut Trichopeltina sed sporidiis 4locularibus.

1. Trichoneltula Hedycariae Theiss., l. cit., tab. 1 fig. 3. - Epiphylla, 4979 Thallo vittaeformi, repente, ramoso, vittis brunneo-atris 50-90 u latis. radiato-prosenchymaticis, cellulis anguste rectangularibus: pyenotheciis in thallo formatis, aliis conidioferis 50 µ, aliis ascophoris 80-100 u diam., applanato-hemisphaericis demum apice perforatis: conidiis bacillaribus, hyalinis. continuis, 7-8 \* 1-1,5; ascis aparaphysatis, octosporis, obelavatis, supra late rotundatis, infra in nodum brevissimum coarctatis, 25-30 × 16-18; sporidiis tristichis, hyalinis. oblongis, subcurvatis, 13.15 × 2,5-3, triseptatis, cellulis mediis subcubicis, extremis subconice attenuatis.

Hab. in foliis Hedycariae dentatae (Monimiaceae), in Nova Zelandia (Colenso n. 163 in Herb. Kew, sub Asterina reptans B. et C.).

PYCNOCARPON Theiss., Die Gattung Asterina (1912) p. 31; Centribl. Bakt. II Abt. 39. (1913) p. 639. - Theiss. et Sydow, l. c. p. 427. -Thallus superficialis consistens ex membranis simplicibus (strato cellularum unico) prosenchymatico-radiantibus, orbicularibus, confluentibus, in centro stratoso et elevato pycnothecia formantibus. Pycnothecia in thallo formata (cellulis ipsius crebrius divisis et incrassatis) rima longitudinali (ostiolo non typico) dehiscentia. Asci aparaphysati. Sporidia phaeodidyma. Receptacula pycnotheciis similibus producunt pycnoconidia atra continua.

1. Pycnocarpon magnificum (Syd. et Butl.) Theiss. l. c., Asterina ma- 4980 gnifica Syd. et Butl., Ann. Mycol. IX, 1911, p. 391. - Peritheciis hypophyllis, plus minus dense aggregatis, hinc inde crustas atras formantibus atro-brunneis, planis, ambitu rotundatis v. subinde lobatis, margine elevato, 500-800 µ diam., rima singula v. pluribus elongatis dehiscentibus, in juventute ut plurimum poro minuto rotundo apertis, mycelio parce evoluto ex hyphis 8-9 μ cr. composito, contextu radiatim celluloso; pycnidiis eadem forma et struc. tura ac peritheciis; pycnidiosporis ovato-oblongis v. oblongis, continuis, brunneis, 35-50 \* 15-18; ascis obovatis v. subglobosis, 52-92 \* 50 75, 2-8-sporis; sporidiis ellipsoideis, utrinque rotundatis medio 1-septatis, valde constrictis, levibus, brunneis v. fumoso-brunneis,  $33.40 \approx 20.25$ .

Hab. in foliis Terminaliae sp. (Combretaceae), Moulmein, Burma, Indiae or. (E. J. BUTLER).

2. Pyenocarpon fimbriatum H. et P. Sydow, Aun. Mycol. XII, 1914, 4981 p. 563. - Membranis amphigenis, primitus plus minus orbiculari-

bus, dein pluribus confluentibus et tunc pelliculas irregulares vel suborbiculares 1-2 mm. latas formantibus, superficialibus, atris, sub microscopio opace vel fere opace brunneis, ex hyphis prosenchymatico-radiantibus 5-7 µ crassis creberrime septatis (articulis 6-8 µ longis) strato singulo compositis, ambitu hyphis similibus sed remotius septatis plus minus longe fimbriatis, hyphis liberis membranas obtegentibus nullis; pycnotheciis orbicularibus vel saepius ellipticis, 80-150 u longis, convexis opacis; sporidiis nos visis.

Hab. in foliis Hopeae plagatae (Dipterocarpaceae). Angat prov. Bulacan, Luzon, Ins. Philippin. (M. RAMOS).

3. Pycnocarpon Parashoreae Syd., Ann. Mycol, XV, 1917, p. 235. - 4982 Thallus superficialis membranas planas confluentes 1-4 mm. diam... atras prosenchymatico-radiantes formans; membranae e strato cellularum unico hypharum fuscarum 2,5-3 µ crassarum septatarum (articulis 6-8 µ longis) compositae ad ambitum hyphis toruloso-flexuosis flavo-brunneis 2,5-3 5 µ crassis fimbriatae; hyphae liberae supra membranas repentes parum evolutae, 3-4 µ crassae; pycnothecia numerosa, ex hyphis obscurioribus crassioribus 3,5-4,5 µ crassis et crebrius septatis (articulis 3:5-5 µ longis) composita; asci ovato-globosi, aparaphysati, superne incrassati, 48-60 × 38-42, octospori; sporae ellipsoideo-oblongae, utrinque rotundatae, medio septatae et constrictae, ex hyalino fuscidulae, leves 25.27 \* 10-12; receptacula conidiigera pycnotheciis similia, poro rotundo ca. 20 µ lato aperta, pycnoconidia oblonga vel anguste ellipsoidea, utrinque rotundata, hyalina, 22-25 \* 10, episporio crasso, ad apicem hypharum tenuium hyalinarum brevium ortae.

Hab. in foliis Parashoreae plicatae (Dipterocarpaceae), Rizal, Luzon, Ins. Philipp. (H. S. YATES).

4. Pycnocarpon nodulosum H. et P. Sydow, Ann. Mycol. XII, 1914, p. 4983 562. -- Membranis epiphyllis, primitus plus minus orbicularibus, dein pluribus confluentibus et tune valde irregularibus, singulis 200-500 µ diam. majoribus usque 1-2 mm. diam., superficialibus planis, atris, sub microscopio pellucide brunneis, ex hyphis prosenchymatico-radiantibus 3-5 µ crassis creberrime septatis (articulis übique 5-7 μ longis) strato singulo compositis; hyphis liberis membranas obtegentibus rectis, laxe rectangulariter v. fere rectangulariter et opposite ramosis, 3-5 μ crassis, septatis (articulis 14-25 μ long) obscure castaneo-brunneis, noduliferis; nodulis hypharum sat numerosis, unilateralibus, hemisphaericis, 6-8 µ crassis; pycnotheciis plus minus numerosis in quaque membrana, minutis, orbi-

cularibus usque ellipticis,  $100-140~\mu$  diam., convexis, opacis v. fere opacis; sporidiis phaeodidymis (ut videtur).

Hab. in foliis Parinarii corymbosi (Rosaceae), Antipolo prov. Rizal, Ins. Philippin. (M. RAMOS). — Ob hyphas noduliferas a Pyen. magnifico mox dignoscitur.

# Subf. 6. Hemisphaerieae

Caracteres et dispositio systematica secundum v. Theissen

Hemisphaeriaceae Theiss., Ann. Mycol. II., 1913, p. 469; Mycol. Centralbl. 1913, p. 285. — Theissen et Sydow, Ann. Mycol. 15, 1917, p. 427.

Mycelium plerumque nullum, v. superficiale ramoso-reticulatum coloratum exhyphopodiatum. Ascomata superficialia scutata, contextu scutelli effuso parenchymatico v. labyrinthiformi-plechtenchymatico; matura rotundato-aperta v. lacerata:

- A. Scutellum laxe reticulatum, cyaneovirescens, margine radianti; mycelium proprium nullum; hymenium symplex polyascum
  - a) Sporidia continua hyalina
  - b) Sporidia hyalodidyma
    - 1.) Scutellum poro centrali praeditum
    - 2.) Scntellum poro destitutum
  - c) Sporidia 3-locularia hyalina
    - 1.) Paraphyses praesentes
  - 2.) Paraphyses nullae
  - d) Sporidia elongato-filiformia, septata

DICTYOPELTINEAE Theiss.

DICTYOTHYRINA Th.

DICTYOTHYRIUM Th.

DICTYOPELTIS Th.

DICTYOTHYRIELLA Rhem.

MICROPELTIS Mont.

MICROPELTELLA Syd.

SCOLECOPELTIS Speg. (= Scolecopeltopsis v. H.)

B. Scutellum pseudoparenchymaticum brunneum, margine radianti; mycelium proprium nullum; hymenium simplex v. compositum, monascum, v. polyascum

THRAUSMATOPELTINEAE Theiss.

- a) Hymenium singulum
  - 1. Sporidia continua hyalina
  - 2. Sporidia hyalodidyma
  - a) Ascoma rotundatum, poro circulari nullo
    - \* Paraphyses praesentes
    - \*\* Paraphyses nullae
  - β) Ascoma lineare, longitudinaliter apertum

HAPLOPELTIS Th.

CLYPHOLUM Speg.
MICROTHYRIELLA V. H.

SCHIZOTHYRIUM Desm. (= Epipeltis Th.)

3. Sporidia hyalina plurilocularia

PHRAGMOTHYRIELLA V. H.

- b) Hymenia plurima, contextu hypotheciali fibroso
  - Hymenium singulum polyascum; sporidia hyalodidyma

POLYCLYPROLUM Th.

- 2. Hymenium singulum monascum
  - \*) Sporidia hyalodidyma
  - \*\*) Sporidia hyalophragmia

EREMOTHECA Th. et Syd. EREMOTHECELLA Syd.

 C. Scutellum labyrinthiformi-plechtenchymaticum, centro apertum v. non; mycelium ramoso-reticulatum, exnyphopodiatum

PLOCHMOPELTINEAE Th.

 a) Scutellum clausum; paraphyses nullae; hymenium mouascum; sporidia hyalodidyma

PLOCHMOPKLIS Th.

b) Scutellum poro centrali praeditum; hymenium polyascum; sporidia hyalodidyma

- 1. Membrana setulis destituta
  - \*) Paraphyses praesentes
  - \*\*) Paraphyses nullae

2. Membrana setulis praedita

STOMIOPELTIS Th. STOMIOPELTELLA Th.

CHAETOPELTOPSIS Th.

### Trib. 1. Dictyopeltinae Theiss.

# Sect. 1. Hyalosporae

Dictyothyrina Theiss., Ann. Mycol. XI, 1913, p. 468. — Theiss. et 4984 Syd. in l. c., XV, 1917, p. 429. — Membrana distincte reticulata, viridi-cyanea, depressa, centro circulariter aperta. Hymenium simplex polyascum Hypothecium tenue, hyalinum, fibrosum. Paraphyses praesentes. Epithecium nullum. Sporidia hyalina unilocularia. — Typ. gen. Dict. fecunda (Sacc. ut Myiocopron) Th., D. atrocyanea (Starb.) Th.

# Sect. 2. Hyalodidymae

- DICTYOTHYRIUM Theiss., Oesterr. bot. Ztschr. 1912, p. 277. Theiss. et Syd., Ann. Mycol. XV, 1917, p. 429.— Est Dictyothyrina hyalodidyma.
- Dictyothyrium giganteum Syd., Philipp. Journ. of Bot. 1X, 1914, n. 2, 4985
   p. 178 Peritheciis plerumque hypophyllis, sparsis, sine maculis, omnino superficialibus, sine mycelio, atris, opacis, rotundatis, 500 700 μ diam., carbonaceis, planis, centrum versus lenissime ele-

vatis, poro rotundato distincto 25-35  $\mu$  lato instructis; contextu centrali omnino opaco obscure atro-coeruleo, peripherico laxiore dilutiore amoene coeruleo usque hyalino ex hyphis tenuissimis 1-1,5  $\mu$  latis dense ramosis et maeandrice conjunctis composito; ascis subsaccatis, ad basim latis apicem versus plerumque angustioribus, sessilibus, crasse tunicatis (praecipue ad apicem), 90-125  $\times$  35-45, 2-4-sporis, copiosissime filiformiter paraphysatis; sporidiis oblongo-cylindraceis, utrinque late rotundatis, ad septum constrictis, hyalinis intus densissime granulosis 65-100  $\times$  16-18, loculis sive aequalibus, sive quoad longitudinem inaequalibus.

Hab. in foliis Memecylonis lanceolati (Melastomataceae), socia Morenoella Memecyli Syd., Palawan, Taytay, Ins. Philipp. (MERRILL).

2. Dictyothyrium leucopterum Syd., Ann. Mycol. XIV, 1916, p. 93. — 4986
Peritheciis epiphyllis, sparsis, omnino superficialibus, sine mycelio, rotundatis, subcarbonaceis, planis, poro rotundo distincto 35-40 μ lato pertusis, 500-800 μ diam., ad marginem praeterea zona latissima hyalina 300-400 μ lata circumdatis; contextu centrali omnino opaco obscure atro-coeruleo, peripherico laxiore coeruleo ad marginem latissimum hyalino, ex hyphis tenuissimis 1-1,5 μ latis dense ramosis et maeandrice conjunctis composito; ascis obclavatis, apice rotundatis vel leniter attenuatis, copiose paraphysatis, 125-170 × 18-35, 2-3-4-6-sporis, raro 8-sporis; sporidiis plerumque distichis, variabilibus, primo minoribus 40-60 μ tantum longis, in maturitate usque 140 μ longis, 14-18 μ latis, hyalinis, 1-septatis, ad septum constrictis, plerumque inaequilateris, loculis plerumque valde inaequalibus, inferiore multo longiore, subinde etiam aequalibus.

Hab. in foliis Coccolobae (Polygonaceae), Seringal, S. Francisco, Rio Acre, Brasilia. (E. ULE). — Huc pertinet etiam D. chalybaeum (Rehm) Th., D. subcyaneum (E. et M.) Th., D. giganteum Syd.

DICTYOPELTIS Theiss., Ann. Mycol. XI, 1913, p. 468. — Theiss. et 4987 Syd., l. c., XV, 1917, p. 430. — Membrana astoma maturitate usque ad marginem disrupta. Paraphyses nullae. Caeterum ut Dictyothyrium. Typ. gen. D. vulgaris (Rac. ut Clypeolum) Theiss., D. colubrina (E. et K.) Theiss.

# Sect. 5. Hyalophragmiae

MICROPELTIS Mont. — Syll. II p. 669, IX p. 1069, XI p. 381, XIV, p. 690, XVI p. 642, XVII p. 868, XXII p. 525.

1. Micropeltis Semecarpi Syd., Enum. Philipp. Fungi II, in Philipp. 4988

Journ. of Sci. VIII (1913) p 488. — Peritheciis epiphyllis, sine maculis, in greges 1-4 cm. latos aequaliter densiusculeque dispositis, dimidiatis, centro elevatis, minute papillulatis et pertusis, discoideis, 200-240 μ diam., atris glabris, contextu ex hyphis tenuibus, olivaceo-brunneis, flexuosis vel etiam ramosis, non vel vix septatis, 1-1,5 μ cr. subradiatim composito, margine plus minusve lato, albomembranaceo, tenuissimo cinctis; ascis cylindraceo-clavatis, apice obtusis, 45-55 × 8-11, octosporis, paraphysibus copiosis simplicibus filiformibus 50-60 × 0,75 obvallatis; sporidiis oblique monostichis vel distichis, fusoideis, primo 1-septatis dein 2-septatis, constrictis, hyalinis, ntrinque obtusis, 15-18 × 3-5.

Hab. in foliis Semecarpi cuneiformis (Anacardiaceae), Luzon, Manila, ins. Philipp. (MERRILL).

2. Micropeltis borneensis P. et H. Syd., Ann. Mycol. X, 1912, p. 81.— 4989 Peritheciis epiphyllis, sine maculis, sparsis, sessilibus, dimidiatoscutatis, membranaceis, mycelio carentibus, atris, 300-400 μ diam., centro papilla elevata praeditis, tandem e centro marginem versus dehiscentibus, contextu tenuissimo atro-coeruleo ad ambitum ex hyphis tenuibus dense intertextis anastomosantibus composito; ascis clavatis v. clavato fusoideis, 45-60 × 12-17, octosporis, paraphysatis; sporidiis distichis v. conglobatis, fusiformibus, 5-septatis, ad septa constrictis, facile in loculos secedentibus, utrinque obtusis hyalinis, 20-25 × 4-5.

Hab. in foliis vivis Anonaceae, Hayoep, Borneo sud-or. (H. WINKLER); in foliis Goniothalami. Elmeri (Ahonaceae), Mt. Maquiling, ins. Philipp. — Fm. sporidiis saepe 7-cellularibus in foliis Eugeniae sp. (Myrtaceae), Mt. Maquiling. — Fm. sporidiis saepius 5-cellularibus in foliis Fici caudatifoliae (Moraceae), Los Baños, Ins. Philipp. (C. F. BAKER).

3. Micropeltis macromera Syd., Ann. Mycol. XIV, 1916, p. 89. — Pe-4990 ritheciis epiphyllis, sparsis, orbicularibus, 600-800 μ diam., dimidiatis, centro elevatis, ostiolo ca. 25-30 μ lato rotundo pertusis, atris, glabris, contextu ex hyphis tenuibus, obscure atro-coeruleis flexuosis 1-1,5 μ latis subradiatim composito, margine angusto albomembranaceo tenuissimo cinctis, ascis fusoideis, octosporis, obtusis, 120-150 × 23-35, paraphysibus numerosis hyalinis, 1 μ crassis; sporidiis di-tristichis, fusoideis, semper biseptatis, constrictis, hyalinis, subrectis, 38-62 × 9-11, utrinque attenuatis, cellulis duabus extimis plerumque cuneatis et longioribus.

Hab. in foliis Philodendri (Araceae), Seringal S. Francisco Rio Acre, Brasilia (E. ULE).

4 Micropeltis epixyla Sacc., Notae Mycol. XXIV p. 29 (Bull. Orto bot. 4991 Nap. 1918). — Peritheciis in ligno dealbato subsparsis, superficialibus, dimidiato-scutiformibus, subcircularibus, 90-150 μ diam., tenui-membranaceis, poro 25 μ lato pertusis, nigricantibus, contextu radiatim prosenchymatico, margine leviter denticulato; ascis fasciculatis, tereti-clavatis, 40-65 \* 9, apice obtuso crassiuscule tunicatis, filiformi-paraphysatis, oligosporis (\*); sporidiis distichis, fusoideis, utrinque obtusulis, saepe curvulis, 18-20 \* 3-4, tetrablastis (an demum 3-septatis \*) non constrictis, hyalinis.

Hab. in liguo emortuo Coryli Avellanae (Betulaceae), Avellino, Ital merid. — Specimina non omnino matura, sed species distincta videtur.

5. Micropeltis Evonymi Syd., Ann. Mycol. XV, 1917, p. 229. — Thyrio-499 thecia amphigena, plerumque hypophylla, sparsa, haud maculicola, orbicularia, 600-800 μ diam., opace atro-coerulee et reticulatim contexta, ad ambitum hyalino-marginata, poro rotundo 30-40 μ lato pertusa; asci sessiles, fusoidei vel ventricosi, 80-100 × 20-30, octospori paraphysati; sporae tereti-clavulatae, typice 3-septatae, vix vel leniter constrictae, hyalinae, superne late rotundatae, basim versus obtuse attenuatae, rectae vel curvatae, 25-30 × 7;5-9.

Hab. in foliis Evonymi japonicae (Celastraceae), Mt. Maquiling prov. Laguna, Ins. Philipp. (C. F. BAKER).

6. Micropeltis corruscans Rehm, Ascomyc. Philipp. II, in Philipp. Journ. 4993 of Sci. VIII (1913) p. 255. — Peritheciis in foliorum vivorum pagina inferiore decolorata crispataque gregarie sessilibus, dimidiatoscutatis, poro pertusis, centrifuge fusce contextis, glabris, ad marginem hyphis nonnullis septatis fuscidulis usque ad 25  $\mu$  longis obsessis, 100  $\mu$  diam.; ascis clavatis, sessilibus, octosporis, aparaphysatis, 30  $\star$  10; sporidiis oblongis, obtusis, rectis, medio septatis non constrictis, utrinque biguttulatis, dein 4-locularibus, hyalinis, 9-12  $\star$  3-3,5.

Hab. in foliis Synedrellae nodiflorae (Compositae), Luzon, Prov. Laguna, Los Baños ins. Philipp. (C. F. BAKER).

7. ? Micropeltis pitya Sacc., Ann. Mycol. XIII, n. 2 (1915) p. 117. — Pe-499 ritheciis sparsis hypophyllis, superficialibus, secedentibus, nigris, dimidiato-scutatis, in sicco tumidatis convexo-hemisphaericis, 180-200 μ diam. contextu tenuissime celluloso, vix radiante, margine breviter timbriato, ad centrum sensim extenuato, non vere ostio-

lato; ascis ellipsoidis, basi sessilibus sed minus obtusis,  $25 \times 14-15$ , octosporis; sporidiis subtristichis, initio 1-septatis, hyalinis, maturis breviter fusoideis, 3-septatis, non constrictis, dilutissime viridulis,  $14-15 \times 4$ .

Hab. in foliis languidis Abietis balsameae (Coniferae), Tupper Lake N. Y. (House). — Species ob contextum perithecii vix radiantem dubiae sedis et alterius inquirenda in exemplaribus magis evolutis.

8. Micropeltis Acalyphae Syd., Ann. Mycol. XV, 1917, p. 229. — Thy- 4995 riothecia epiphylla, sparsa, sine maculis, vix visibilia, orbicularia, 250-350 μ diam., reticulatim et intense caerulee contexta, praeterea margine hyalino usque 40 μ lato cincta, poro 15-20 μ lato pertusa, asci ventricosi vel subfusoidei, sessiles, 4-6-8-spori, 38-42 × 12-16; paraphyses tenues, filiformes, modice copiosae; sporae clavatae, superne late rotundatae, basim versus attenuatae, plerumque curvulae, hyalinae, 5-septatae, non vel vix constrictae, 20-25 × 4-5.

Hab. in foliis Acalyphae stipulaceae (Euphorbiaceae), Los Baños, Ins. Philipp. (C. F. BAKER).

9. Micropeltis aequalis Syd. in Leaflets of Philipp. Bot. V (1912) p. 4996 1543. — Peritheciis amphigenis, praecipue epiphyllis, plerumque per totam folii superficiem aequaliter dispersis, superficialibus, dimidiato-scutatis, planis, 300-350 μ diam., atris, centro obsolete minutissimeque pertusis, ad marginem latiuscule albo-membranaceis, subiculo nullo, contextu tusco-coeruleo minutissime celluloso; ascis fusoideis vel clavato-fusoideis, subsessilibus, apice obtusis, 45-55 × 8-15, aparaphysatis, octosporis; sporidiis 2-3-stichis, tereti clavulatis, apice rotundatis et incrassatis, 3-septatis, leniter constrictis, hyalinis vel subhyalinis, 16-19 × 3,5-4.

Hab. in foliis Actephilae dispersae (Euphorbiaceae), Brooks Point, Palawan, ins. Philipp. — M. leucopterae Penz. et Sacc. affinis; differt sporidis latioribus.

10. Micropeltis samarensis Syd., Ann. Mycol. XV, 1917, p. 230.— Thy- 4997 riothecia epiphylla, sparsa, orbicularia, scutata, 600-700 μ diam., poro centrali rotundo 30-35 μ lato pertusa, subatra, opaca marginem versus griseo-coeruleum pellucida, vix vel non albo marginata, contextu ut in reliquis generis speciebus; asci cylindraceo-clavati, ad apicem obtusi, breviter stipitati, 100-130 × 17-20, 4-8-spori, copiose paraphysati; sporae di tristichae, fere vermiculares, rectae vel inaequilaterales, 6-7-septatae, ad omnia septa leniter constrictae, hyalinae 48-60 × 6-8, cellula tertia superiore longiore et

crassiore (usque 10 µ crassa).

Hab. in foliis Cyclostemonis sp. (Euphorbiaceae), Catubig River, Samar, Ins. Philipp. (M. RAMOS). — Microp. corynesporae affinis.

11. Micropeltis applanata. — Syll. II, p. 669. — Var. Galeariae Sacc., 4998 Notae Mycol. XXIV, p. 12 (Bull. Orto bot. Napoli, 1918). — A typo distinguitur sporidiis plerumque 5.7-septatis, fusoideo-clavulatis, 24.30 × 4,5-5,5, ascis 6.8-sporis, filiformi-paraphysatis, 55-65 × 14-18, obclavatis; peritheciis 3.4 mm. lat., ostiolo eroso 100 µ diam.; contextu dense obscure celluloso, atro-fuligineo, non radiato.

Hab. in pag. imprimis super. foliorum adhuc viventium Galearia e affinis (Euphorbiaceae), Changi, Singapore (BAKEE). — Plures species affines: M. Leoniae, M. Hirtellae, M. schmidtiana etc.

12. Micropeltis Rheediae Rehm, Ann. Mycol. IX, 1911, p. 368. — Pe-4999 ritheciis epiphyllis in maculis orbicularibus 0,5-2 cm. diam. fulvogriseis, centrifuge pseudoparenchymatice flavidule contextis, gregariis, dimidiatis, orbicularibus, convexulis, poro pertusis, atris, glabris, parenchymatice nigro-coerulee contextis, ad marginem non radiantibus, c. 150  $\mu$  diam.; ascis fusiformibus,  $40 \times 12$ , octosporis; sporis fusoideis, rectis, transverse 5-septatis, hyalinis, 2-3-stichis  $20 \times 3$ ; paraphysibus filiformibus, apice subcurvatis 1  $\mu$ .

Hab. ad folia R h e e d i a e (Guttiferae), prope Para, Brasiliae (C. F. BAKER). — Perithecia minutissima punctiformia; similis species Micr. Xylopiae Henn. quoad sporas. Plerumque in peritheciis modo sporulae hyalinae, cylindraceae,  $3 \times 1.5$ .

13. Micropeltis leptosphaerioides Speg., Mycet. Argent. VI, Anal. Mus. 5000 Nac. Buenos Aires XXIII (1912) p. 83. — Peritheciis saepius epiphyllis, hinc inde laxe gregariis, atris, glabris, dimidiato-scutatis, 250-400 μ diam., membranaceis, stellatim dehiscentibus, ambitu minute fimbriatis, contextu denso, tenuiter radiante, olivaceo, centro subopaco ambitu pellucido; ascis cylindraceo-obclavatis, breviter crasseque pedicellatis, aparaphysatis, 90-100 × 18-22; sporidiis subtristichis, e cylindraceo subclavatis, leniter curvulis, primo grosse 9-guttulatis dein 7-9 septatis, ad septa non vel lenissime constrictis, loculo quarto supero, Leptosphaeriarum more, caeteris conspicue majore, hyalinis, 30-40 × 8-9.

Hab. ad folia viva Ocoteae diospyrifoliae (Lauraceae), in silvis prope Calilegua, Jujuy, Argentina.

Micropeltis trimera Sacc., Notae Mycol. XXIV p. 13 (Bull. Orto 5001 bot. Napoli (1918). — Peritheciis remote sparsis, epiphyllis, dimi-

diatis, depresso-hemisphaericis, subcircularibus, superficialibus, 560-580  $\mu$  diam., poro centrali 18  $\mu$  diam. pertusis, nigris, contextu prosenchymatico, tortuoso subradianti, atro-fuligineo, in marginem pallidiorem latiusculum erosum extenuato; ascis clavato-cylindraceis. apice rotundatis, breviter stipitatis, filiformi-paraphysatis,  $100\text{-}115 \approx 16$ , saepe curvulis, octosporis; sporidiis distichis, fusiformibus, utrinque acutulis, saepius curvulis,  $35 \approx 8$ , subhyalinis, trilocularibus, non constrictis.

Hab. in foliis emortuis Gustaviae insignis cultae (Lecythidaceae), Singapore (BAKER). — Affinis M. mucosae sed sporidiis fusiformibus, subhyalinis, ascis angustioribus etc. differt.

15. Micropeltis similis Syd., Ann. Mycol. XV, 1917, p 230. — Thyrio- 5002 thecia in hypophyllo haud decolorato late dispersa, dimidiata, orbicularia, 500-700 μ diam., contextu reticulato opaco marginem versus sordide coerulescente praeterea zonula angusta hyalina mox evanida cincta, poro 20-30 μ lato aperta; asci fusiformes vel saccati aut ventricosi, sessiles, 80-90 × 20-25, octospori; paraphyses paucae, tenuiter filiformes; sporae distichae, clavatae, 5-septatae, non constrictae, 25-28 × 7-8, hyalinae, superne late rotundatae, basim versus attenuatae, cellulis duabus superioribus aequalibus et parum majoribus.

Hab. in foliis Bauhiniae Cumingianae (Leguminosae), Los Baños, Ins. Philipp. (C. F. BAKER).

16. Micropeltis consimilis Rehm, Ascomyc. Philipp. III, in Philipp. 5003 Journ. of Sci. VIII (1913) p. 394. — Peritheciis in utraque foliorum pagina immutata sparsis, sessilibus, ambitu circularibus, dimidiato-scutatis, poro pertusis, glabris, atro-violaceis, arcte reticulate contextis, haud radiatis, 200 μ diam.; ascis elongato-ovoideis, sessilibus, 70 ≈ 12, octosporis, aparaphysatis; sporidiis clavatis, apice superiore obtuso, inferiore acutato, rectis, transverse plerumque 3, interdum 4-septatis, cellula suprema plerumque majore, hyalinis, 20-25 ≈ 5-6, distichis.

Hab. in foliis Derridis (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO). — Proximae videntur M. distincta Henn. et M. aequalis Syd.

17. Micropeltis vagabunda Speg. — Syll. XI p. 382 — var. calamincola 5004 Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 394. — Peritheciis in foliis haud maculatis sparsis, amphigenis, dimidiato-scutatis, nigris, poro centrali pertusis, convexulis, faciliter ab epidermio solutis, glabris, 300 μ diam., intricato violacee con-

textis, integre marginatis; ascis fusiformibus, sessilibus, octosporis, filiformi-paraphysatis,  $50-60 \times 10-12$ ; sporidiis 2-3-stichis fusiformibus, utrinque acutatis, rectis, 3-septatis, non constrictis, hyalinis,  $15 \times 3-3.5$ .

Hab. in foliis ? Calami (Palmae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

18. Micropeltis Pometiae Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2229. — Peritheciis in epiphyllo pallidiore sparsis, sessilibus, dimidiato-scutatis, orbicularibus, nigris, glabris, convexulis, mox applanatis, minute papillatis, poro 30 μ lato pertusis, 0,5-1 mm latis, contextu reticulato, violaceo, ad marginem integrum pallidiore, hyphis nullis excurrentibus cinctis; ascis oblongis, apice rotundatis, filiformi-paraphysatis, 100 × 15; sporidiis distichis, fusiformibus, utrinque acutatis, 3-septatis, hyalinis, 25-30 × 5-6.

Hab. in foliis Pometiae pinnatae (Sapindaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

19. Micropeltis rhopaloides Syd., Ann. Mycol. XV, 1917, p. 230. — Thyriothecia sparsa, amphigena, plerumque hypophylla, 400-600 μ diam., poro rotundo 25-40 μ lato pertusa, contextu generis, omnino opaco, atro-coeruleo, membrana hyalina ad marginem non vel vix evoluta; asci fusoidei, sessiles, paraphysati, 80-115 × 20-24, 4-8-spori; sporae clavatae, superne late rotundatae, basim versus angustatae, sed una basi obtusae, 4-5 septatae, tandem leniter constrictae, hyalinae, 26-35 × 8-9, cellulis duabus superioribus multo majoribus.

Hab. in foliis Palaquii sp. (Sapotaceae), Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

20. Micropeltis aeruginascens Rehm, Ascomyc. Philipp. V, Leaflets of 5007 Philipp. Botany, VI (1914) p. 2228. — Ita vocanda M. applanata Rehm (Philipp. Journ. Sci. VIII p. 394) non Mont.

MICROPELTELLA Syd., Ann. Mycol. XI, 1913, p. 404 (Etym. a Micropeltide, cui affine genus). — Characteres Micropeltidis sed defectu paraphysium diversa.

Micropeltella Merrillii Syd., Philipp. Journ. of Sc. Sect. Bot., IX, 5008 1914, p. 178. — Peritheciis amphigenis, sine maculis, sparsis, superficialibus, facile secedentibus, opace atro-coeruleis lenticulari scutatis, 250-420 μ diam. marginem versus coerulee pellucidis ibique ex hyphis 1-1,5 μ latis maeandrice denseque conjunctis contextis, praeterea margine hyalino cinctis, ostiolo distincto rotun-

dato 20.25 µ lato; ascis fusoideo-clavatis, sessilibus, aparaphysatis. 60-75 \* 14-18, plerumque octosporis; sporidiis distichis, tereti-clavulatis, apice late rotundatis deorsum attenuatis, rectis vel leniter curvatis, 3-4-septatis, ad septa parum constrictis, hyalinis, 24-30 ≠ 4-6.

Hab. in foliis Schefflerae (Araliaceae), Glycosmidis cochinchinensis (Rutaceae), Celastri paniculati (Celastraceae), Palawan, Taytay, Ins. Philippin. (MERRILL).

2. Micropeltella Ramosii H. et P. Sydow, Ann. Mycol. XII, 1914, p. 5009 562. — Peritheciis hypophyllis, sparsis, sine maculis, superficialibus, facile secedentibus, rotundatis, 700 1000 µ diam., lenticulari scutatis, opace atro-coeruleis, subcarbonaceis, marginem versus pellucidis ibique ex hyphis 1-1,5 µ latis maeandrice denseque conjunctis contextis, praeterea margine angusto subhyalino cinctis, ostiolo rotundo 30-35 µ lato pertusis; ascis clavatis v. fusiformibus, aparaphysatis, 70-90 \* 16-20, 4-6-8-sporis, sporidiis crasse vermiformibus. utrinque late rotundatis, rectis v. inaequilateris, deorsum parum tantum attenuatis, 5-6-septatis, non constrictis, hyalinis, 32-38 × 9-11.

Hab, in foliis Cyclostemonis microphylli (Euphorbiaceae), pr. Angat prov. Bulacan, Ins. Philippin. (M. RAMOS).

3. Micropeltella paetensis Syd., Ann. Mycol. XV, 1917, p. 229. - Pe- 5010 ritheciis epiphyllis, sine maculis, sparsis, orbicularibus, 600-800 µ diam., reticulatim contextis, atro-caeruleis, margine hyalino nullo. poro 20-30 µ lato apertis; ascis fusoideis v. cylindraceis, aparaphysatis, 4-8-sporis, 95-120 \* 18-20; sporidiis fusoideo-clavatis, 6-8-septatis, non v. leniter constrictis, tandem in loculos secedentibus, 46-60 \* 8-10, loculis mediis minoribus.

Hab. in foliis Dichapetali sp. (Dichapetalaceae), pr. Paete, prov. Laguna et in foliis Garciniae venulosae (Guttiferae). M. Maquiling prov Laguna, Ins. Philipp. (BAKER).

4. Micropeltella agusanensis Syd., Ann. Mycol. XV 1917, p. 229. - 5011 Thyriothecia hypophylla, folio immaculato insidentia, dispersa, orbicularia, 500-800 µ diam., atro-coerulea, opaca, ad marginem tantum pellucida et subhyalina, contextu solito generis, poro rotundo 25.35 μ lato pertusis; asci aparaphysati, sessiles, plerumque saccati, 60-70 \* 18-22, octospori; sporae obclavatae, superne late rotundatae, basim versus attenuatae, 5-6-septatae, non constrictae, hyalinae, 24.28 × 6.8, cellulis fere aequalibus.

Hab. in foliis Parkiae Sherfeseei (Leguminosae), Agusan, Mindanao, Ins. Philipp. (M. S. RAZON, SHERFESEE).

5. Micropeltella clavispora Syd., Ann. Mycol. XI, 1913, p. 404. — Petritheciis hypophyllis, sine maculis, sparsis, superficialibus, facile secedentibus, opace atro-coeruleis, lenticulari-scutatis, margine alutis, 500-800 μ diam., opace carbonaceis, marginem versus coerulee pellucidis ibique ex hyphis 1-2 μ latis tenuibus maeandrice denseque conjunctis contextis, praeterea margine ca. 25-40 μ lato hyalino ex hyphis 1-2 μ latis anastomosantibus composito cinctis, ostiolo distincto, rotundato, 30-40 μ lato; ascis clavatis vel fusoideo-clavatis, sessilibus, aparaphysatis, 90-110 × 15-20, apice rotundatis, 4-8-sporis; sporidiis plerumque distichis, clavulatis vel fusoideo-clavulatis, in maturitate 4-5-septatis, apice late rotundatis, basi rotundatis vel leniter attenuatis, rectis vel leniter curvatis, hyalinis vel subhyalinis, in maturitate ad septa constrictis, 25-37 × 6,5-9-5, parte superiore, deorsum versus angustioribus.

Hab. in foliis Memecyli lanceolati (Melastomataceae), prov. Pangasinaman ins. Luzon, Philippin. (J. AGAMA).

6. Micropeltella maquilingiana Syd., Ann. Mycol. XV, 1917, p. 228.— 5013 Thyriothecia in epiphyllo immutato late dispersa, dimidiata, 600-850 μ diam., orbicularia reticulatim coerulee contexta, ad marginem zonula hyalina usque 30 μ lata cincta, poro minutissimo ca. 10 μ lato pertusa; asci fusiformes, sessiles, aparaphysati, 50-55 × 12-15, 8-demum plerumque 4-spori; sporae subclavatae, rectae, 5-7-septatae, 35 40 × 4-5, hyalinae, cellula suprema latiore et 10-12 μ longa.

Hab. in foliis Aglaiae diffusae (Meliaceae), Mt. Maquiling, Laguna Philipp. (C. F. BAKER).

7. Micropeltella camarinensis H. et P. Sydow, Ann. Mycol. XII, 1914, 5014 p. 561. — Peritheciis epiphyllis, sparsis, superficialibus, facile secedentibus, orbicularibus, 450-650 μ diam., atro-coeruleis, opacis, marginem versus pellucide coeruleis, ex hyphis 1-1,5 μ latis tenuibus maeandrice denseque conjunctis contextis, ostiolo rotundato 20-30 μ lato pertusis; ascis fusoideo-clavatis, sessilibus, octosporis, aparaphysatis, 85-120 × 20-27; sporis plerumque distichis, subinde tristichis, tereti clavulatis, apice rotundatis, deorsum attenuatis, rectis v. curvatis, semper 2-septatis, constrictis, hyalinis, 36-42 × 8-10.

Hab. in foliis Lansii dubii (Meliaceae), Mount Isarong pr. Camarines Luzon, Ins. Philippin. (H. M. Curran).

Micropeltella megasperma Syd., Enum. Philipp. Fungi II, in Philipp. 5015
 Journ. of Sci. VIII (1913) p. 487. — Peritheciis epiphyllis, sparsis, superficialibus, atris, opacis, orbicularibus, 500-900 μ diam., alatoscutatis, marginem versus pellucide coeruleis ibique ex hyphis ca.

1,5  $\mu$  latis maeandrice curvatis dense intertextis compositis, praeterea zona tenuissima membranacea hyalina plus minus lata (40-60  $\mu$ ) saepe latissima (usque ad 160  $\mu$ ) ex hyphis tenuissimis ca. 1  $\mu$  cr. composita cinetis, ostiolo rotundato, 20-25  $\mu$  lato, distincto; ascis sessilibus, fusiformi-clavatis vel cylindraceo-clavatis, crasse tunicatis, 150-200  $\approx$  26-35, aparaphysatis, 2-8-sporis; sporidiis distichis, oblongo-fusoideis, 2-septatis, raro 3-septatis (septis crassis), hyalinis, 65-75  $\approx$  10-16, cellulis subaequilongis, cellula superiore latiore, intus minute granulosis.

Hab. in foliis vivis Eugeniaesp. (Myrtaceae), Luzon, Prov. Laguna, St. Antonio, ins. Philipp. — M. bogoriensi v. Höhn. proxima.

9. Micropeltella? maxima Spegaz., Fungi Costaric. nonn. in Bol. Ac. 5016 Nac. Cienc. Cordoba, t. 23, Extr. p. 213. — Maculae nullae; thyriothecia, membrana basali et margine hyalino destituta, orbicularia maxima 1-2 mm. diam., ostiolo rotundo majusculo (60 μ) pertusa, ambitu vix denticulata, glaberrima, atra fere opaca, dense minuteque sinuoso prosenchymatica; asci subfusoidei maximi, 180-200 × 25-30, saepius tetraspori aparaphysati v. pseudoparaphysibus paucis crassis commixti; sporae hyalinae, oblique monostichae, anguste fusoideo-subclavulatae maximae, 80-85 × 10-12, tetramerae, articulis isomacriis, primo tunica mucosa tenui junctis, serius nudis ac liberis.

Hab. in foliis vivis Piperis speciei ignotae (Piperaceae), prope S. Josè Costarica, America trop.

10. Micropeltella microsperma Syd., Ann. Mycol. XIV, 1916, p. 89.— 5017 Peritheciis hypophyllis, sparsis vel laxe aggregatis, orbicularibus, ambitu subinde lobulatis, 270-320 μ diam., poro rotundo 25-30 μ lato pertusis, contextu flavo-brunneolo ex hyphis 1,5 μ crassis maeandrice curvatis composito, membrana hyalina nulla cinctis; ascis aparaphysatis, cylindraceo-clavatis, breviter stipitatis, 70-95 × 12-14, octosporis, sporidiis distichis, obclavatis, basi late rotundatis, cellula superiore attenuatis, 2-septatis, non constrictis, hyalinis, cellulis duabus extimis 1-2 guttulatis, media non guttulata, 17-20 × 3-3,5.

.Hab. in foliis Uncariae guyanensis (Rubiaceae), Seringal Auristella, Rio Acre, Peruvia (E ULE).

11. Micropeltella acrensis Syd., Ann. Mycol. XIV; 1916, p. 89 — Pe- 2018 ritheciis sparsis, rotundatis, 400-450 μ diam., poro minuto rotundo pertusis, contextu griseo-coeruleo ex hyphis tenuissimis 1-1,5 μ crassis composito, ambitu zona angusta hyalina cinctis; ascis ob-

clavatis, sessilibus, aparaphysatis, 60-75 × 14-16, 4-6-8-sporis; sporidiis oblique monostichis usque distichis, fusoideo-clavatis, ad api cem obtuse attenuatis, basim versus sensim attenuatis, 45-septatis, non constrictis, hyalinis, 30-36 × 4-5.

Hab. in foliis Sapotaceae, Seringal, S. Francisco, Rio Acre, Brasilia (E. ULE).

12. Micropeltella bogoriensis (v. Höhn.) Sydow, l. c., Micropeltis bogo- 5019 riensis v. Höhn., Fragm. z. Mykol. 725, Sitzsb. Akad. Wiss. Wien CXXI, i, p. 346 (1912). — Peritheciis hypophyllis, sparsis, vel laxe gregariis superficialibus, opace caeruleo-atris, inferne lenticularibus et hyalinis, superne circulari-clypeiformibus, 400-700 µ latis, opacocarbonaceis, ad marginem caeruleo-pellucidis ibique ex hyphis 1,5-2 µ cr. maeandrice contextis compositis, margine hyalino 40 µ circ. lato praeditis; ostiolo irregulariter circulari, 25 µ lato; ascis sessilibus, fusoideo-clavatis, apice rotundatis et crasse tunicatis, 2-8 sporis, 125-140 \* 22-25, paraphysibus nullis; sporidiis distichis, hyalinis, fusoideis vel clavato-oblongis, plerumque paullo curvatis, 3-4-cellularibus, granuloso-farctis, 42-54 × 7-12, loculo centrali cylindraceo, loculis apicalibus conoideo-rotundatis.

Hab. in foliis coriaceis arboris indet., Buitenzorg, Java.

- DICTYOTHYRIELLA Rehm, Broteria XII, 1914, p. 92. Theiss. et Syd., Ann. Mycol. XV, 1917, p. 430. - Est Micropeltis sporidiis trilocularibus.
- 1. Dictyothyriella Trewiae Syd., Ann. Mycol. XV, 1917, p. 231. 5020 Thyriothecia in epiphyllo haud decolorato late dispersa, orbicularia, 300-350 µ diam., reticulatim contexta, atro-coerulea, poro aperta, asci clavati vel fusoidei, sessiles, 45-55 × 12-15, octospori, ut videtur parce paraphysati; sporae distichae oblongae, semper 2-septatae, hyalinae, in maturitate constrictae, 13-17 × 4,5-5.

Hab. in foliis Trewiae ambiguae (Euphorbiaceae), Mt. Maquiling prov. Laguna, Ins. Philipp. (C. F. BAKER).

2. Dictyothyriella heterosperma Syd., Ann. Mycol. XV, 1917, p. 231. - 5021 Thyriothecia in epiphyllo immutato dispersa, dimidiata, orbicularia, 700-1000 µ diam., reticulatim contexta, atro-coerulea, opaca, ad marginem tantum pellucida, praeterea zonula hyalina usque 40 µ lata cineta, poro 25 35 µ lato rotundo aperta; asci fusiformes vel obelavati aut cylindracei, sessiles, 130-170 × 22-26, paraphysati, 4-8spori, J -; sporae fusoideae, utrinque acutae, hyalinae, plerumque 2-septatae, variabiles, constrictae, 50-72 > 7-10, tandem in lo-

culos secedentes, loculo supero plerumque majore 25-40 µ longo. Hab. in foliis Malloti Cumingii (Euphorbiaceae), Los Baños, Ins. Philipp. (C. F.BAKER), Knemae heterophyllae (Myristicaceae), Mt. Maquiling et Nephelii mutabilis (Sapindaceae), Diospyrisp. (Ebenaceae), M. Maquiling pr. Laguna (BAKER), Ficilongicaudati (Moraceae), Los Baños: C. F. BAKER).

3 Dictyothyrielia Bauhiniae (Rehm) Theiss. et Syd., Ann. Mycol. XV, 5022 1917, p. 430, Micropeltis Bauhiniae Rehm, Ascomyc. Philipp. IV, Leaflets of Philipp. Botany, VI (1913) p. 1945. — Peritheciis epiphyllis, non maculicolis, sparsis, dimidiato-scutatis, poro pertusis, nigris, glabris, 200 μ latis, intricato-contextis, fuscis, ad marginem hyalinis, hyphis radiantibus carentibus; ascis oblongis, late sessilibus, apice rotundatis, crasse tunicatis, 30-35 × 9, paraphysibus filiformibus 2 μ cr. obvallatis; sporidiis (modo intra ascos vivis) distichis, clavatis, 2-septatis, cellula suprema multo majore, rectis, hyalinis, 10-12 × 3.

Hab. in foliis Bauhiniae cumingianae (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

4 Dictyothyriella mucosa (Syd.) Sydow, Ann. Mycol. XV, 1917, p. 231, 5023

Micropeltis muc. Syd., Ann. Mycol. XIV, 1916, p. 364. — Hypophylla, sine maculis, sparsa; peritheciis orbicularibus, superficialibus, 350-600 μ diam., atro-coeruleis, ad marginem pellucide coeruleis, ex hyphis 1 μ latis tenuibus macandrice denseque conjunctis contextis, peripherice praeterea zonula angusta hyalina cinctis, ostiolo rotundato 25-30 μ lato pertusis; ascis clavatis, subcylindraceis vel saccatis, superne rotundatis, stipite brevissimo praeditis, 2-4-6-8-sporis, 75-120 ≈ 20-26; paraphysibus copiosissimis, tenerrimis, copiose patenti-ramosis, sporidiis 1-3-stichis, clavatis. hyalinis, typice 2-septatis, 30-38 ≈ 8-10, strato mucoso hyalino cinctis, rectis vel curvatis, cellula superiore majore obtuse attenuata, media subquadratica, inferiore angustiore sed longiore.

Hab. in foliis Coffese excelsse (Rubiaceae), Los Baños, ins. Philipp. (C. F. Baker).

# Seet. 6. Scolecosporae

SCOLECOPELTIS Speg — Syll. IX p. 1072, XIV p. 646, XVII p. 874, XXII p. 533. — Syn. Scolecopeltis v. Höhn. 1909, Syll. XXII p. 534.

1. Scolecopeltis Garciniae Rehm, Ascomyc. Philipp. IV, Leaflets of Phy- 5024

lipp. Botany, VI (1913) p. 1946. - Peritheciis in pagina superiore foliorum haud decolorata insidentibus, sparsis, sessilibus, discoidalibus, dimidiato-scutatis, poro perspicuo pertusis, nigris, 1 mm. usque latis, ex hyphis 1-1,5 µ latis fuscis intricato-centrifuge contextis, ad marginem hyphis vix radiantibus, subhyalinis; ascis subfusiformibus, sessilibus, crasse tunicatis, 120-130 × 20-25, paraphysibus tenerrimis, vix 1 \mu cr. intermixtis; sporidiis parallele dispositis. vermicularibus, utrinque subobtusis, 18-locularibus, ad septa subconstrictis, hyalinis, 100 > 5-6.

Hav. in foliis Garciniae venulosae (Guttiferae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES). - Sporidia immatura modo in asco recognita.

2. Scolecopeltis Bakeri Syd., Ann. Mycol. XV, 1917, p. 232. - Thyrio- 5025 thecia hypophylla sine maculis, sparsa dimidiata, orbicularia, 0,5-0,8 mm. diam., reticulatim-coerulee contexta, ad marginem non vel vix hyalina, centro subopaca, poro ca. 30-35 a lato pertusa: asci oblongo-fusiformes, sessiles, 110-170 \* 20-25, 4-8-spori, paraphysati, sporae subcylindraceae, utrinque leniter attenuatae, hyalinae, 10-12-septatae, usque 120 μ longae, 7-10 μ crassae, jam intra ascos in articulos secedentes, articulis mediocribus majoribus (10-12 µ longis).

Hab. in foliis Aglaiae Harmsianae (Meliaceae), Mt. Maquiling, Celtidis philippinensis (Ulmaceae), Los Baños et Tetrastigmatis sepulchrae (Vitaceae), Mt. Maquiling (C. F. BAKER).

3. Scolecopeltis Connari Syd., Ann. Mycol. XV, 1917, p. 232. - Thy- 5026 riothecia in hypophyllo immutato sparsa, dimidiata, orbicularia, 400-500 μ diam., reticulatim coerulee contexta, zonula hyalina usque 30 μ lata circumdata, poro 20 μ lato pertusa; asci fusiformes, 80-125 × 22-28, octospori, paraphysati, J -; sporae 2-3-stichae, cylindraceo-clavatae, rectae, 6.7-septae, 50-65 \* 6.7, mox in articulos saepe valde in equales secedentes, hyalinae.

Hab. in foliis Connari neurocalycis (Rosaceae), pr. Paete, Laguna, Ins. Philipp. (C. F. BAKER).

### Trib. 2. Thrausmatopeltinaee Theiss.

# Sect. 1. Hyalosporae

HAPLOPELTIS Theiss., Broteria XII, 1914, p. 88. - Theiss. et Syd., Ann. Mycol. XV, 1917, p. 430. - Membrana brunnea, contextu

polygonali donata, margine ex hyphis elongatis fibrillosa, mycelio proprio nullo praedita, poro centrali circulari. Hymenium simplex polyascum. Paraphyses nullae. Sporidia unilocularia hyalina.

1. Haplopeltis bakeriana (Rehm) Theiss. l. c., Myiocopron bakerianum 5027 Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 393. — Peritheciis scutato-dimidiatis, orbicularibus, convexulis, distincte minute papillulatis, poro pertusis, nigris, 250-300 μ latis, singularibus, mox in maculas nigritulas late effusas confluentibus, parenchymatice fusce contextis, ad marginem hyphis paucis fuscidulis radiantibus; ascis clavatis, apice rotundatis, sessilibus, 50 × 10-12, octosporis, aparaphysatis; sporidiis distichis, ellipsoideis, rectis, 1-cellularibus, non guttatis, hyalinis, 12-15 × 5.

Hab. in ramis putrescentibus Passiflorae quadrangularis (Passifloraceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Ascis clavatis, non ovoideis et sporidiis ellipsoideis praecipue dignoscenda. A proxima H. millepunctata (Penz. et Sacc.) distinguitur papillis evidentibus.

# Sect. 2. Hyalodidymae

MICROTHYRIELLA v. Höhnel, Fragm. z. Myk. VI, 1909, p. 244. — Theiss. et Syd., Ann. Mycol. XV, 1917, p. 431. — Microthyrium Syll. XXII p. 517. — A Clypeolo differt paraphysibus nullis. — Typ. gen. Micr. Rickii (Rehm) v. Höhn. l. c.

1. Microthyriella philippinensis Syd., Ann. Mycol. XI, 1913, p. 405, XV, 5028 1917, p. 235. — Peritheciis epiphyllis, singulis etiam hypophyllis, sine maculis et sine mycelio, orbicularibus, sparsis, 150-400 μ diam., omnino superficialibus, tenuissimis, planis, scutato-dimidiatis, atris, haud ostiolatis, pariete superiore tantum bene evoluto ex uno strato cellularum quadratarum vel varie angulatarum saepe irregularium 3,5-5 μ latarum obscure olivaceo-brunnearum composito, margine angusto hyalino tenuissimo cinctis; ascis copiosis, sessilibus, globosis, subglobosis vel ovatis, 34-46 × 25-34, octosporis; paraphysibus irregulariter ramosis, haud typicis, plectenchymatice connatis, submucosis; sporidiis parallele positis, oblongo-fusiformibus, utrinque rotundatis vel cellula basali saepe attenuatis, medio 1-septatis et non constrictis, hyalinis, 18-26 × 9-10, cellula superiore saepe paullo latiore.

Hab. in foliis vivis Aglaonematis (Araceae), Lepisanthis schizolepis (Sapindaceae), Evonymi japonici

(Celastraceae), Bauhiniae Cumingianae (Leguminosae), Los Baños ins. Philippinensium (S. A. REYES, C. F. BAKER).

2. Microthyriella uleana Syd., Ann. Mycol. XIV, 1916, p. 89. — Peritheciis epiphyllis, mycelio nullo, superficialibus, orbicularibus, sparsis, 150-250 μ diam., tenuissimis, planis, scutato-dimidiatis, atris, haud ostiolatis, pariete superiore tantum bene evoluto ex uno strato cellularum quadratarum vel varie angulatarum 3,5-5 μ latarum olivaceo-brunnearum composito, margine angusto hyalino tenuissimo cinctis; ascis sessilibus, subglobosis vel ovato-globosis, 50-65 × 40-45, octosporis; paraphysibus genuinis nullis; sporidiis parallele positis, fusiformibus, rectis vel inaequilateris, utrinque obtuse attenuatis, medio 1-septatis et vix vel leniter constrictis, hyalinis, 35-42 × 8-11.

Hab. in foliis Hippocrateae, Seringal Auristella, Rio Acre, Peruviae (E. ULE).

POLYCLYPEOLUM Theiss., Ann. Myc. XII, 1914, p. 67. — Theiss. et 5030 Sydow, l. c. XV, 1917, p. 431. — Est Microthyriella astoma aparaphysata. Disci ascigeri plurimi Sporidia hyalodidyma. — Typ. gen. Pol. Abietis (v. Hönn. ut Polystomella) Th., l. c.

SCHIZOTHYRIUM Desm. — Syll. II p. 723, IX p. 1100, XIV p. 710, XVI p. 657, XVII p. 892, XXII p. 557. — Syn. *Epipeltis* Theiss., Abh. zool. bot. Ges. Wien. Bd. VII, 1913, N. 3., p. 30.

Schizothyrium annuliforme Syd. et Butl., Ann. Mycol. IX, 1911, p. 5031 376 — Stromatibus epiphyllis, maculis majusculis decoloratis indeterminatis effusis insidentibus plerumque concentrice v. annulatim dispositis saepissime biformibus, interioribus majoribus et 2-4 mm. longis subinde confluentibus, marginalibus minoribus 0,5-1,5 mm. diam., rotundatis v. oblongis, confluendo subinde irregularibus, basi immersis, planis, atris, rimis elongatis apertis; ascis clavatis, deorsum in stipitem longissimum attenuatis, superne obtusis, cum stipite 75-130 × 10-13, p. sp. 30-50 μ longa, octosporis; paraphysibus filiformibus, paucis; sporidiis subdistichis, oblongo-ellipsoideis v. oblongis, utrinque rotundatis, continuis, hyalinis v. subhyalinis, 10-15 × 3-5.

Hab. in foliis vivis Aceris oblongi (Aceraceae), Mussoorie Indiae or. (E. J. BUTLER). — Dubiun an gen. Schizothyrio adscribenda species, certo Criellae Aceris-laurini (Pat.) Sacc. et Syd. et Schizothyrii Aceris (P. Henn. et Lind.) Pat. diversa.

- EREMOTHECA Theiss. et Syd., Ann. Mycol. XV, 1917, p. 235 et p. 431. A Eremothecella differt praecipue sporidiis hyalodidymis.—Sec. v. Höhnel (Ber. Deutsch. Bot. Ges. 36., 1918, p. 32) gen. Eremotheca ut synon. gen. Microthyriellae v. H. habendum.
- 1. Eremetheca philippinensis Syd., Ann. Mycol. 15., 1917, p. 235—? Syn. 5032 Rhytisma rufulum B. et C., Syll. VIII p. 757. Thyriothecia in epiphyllo haud maculato late dispersa, plana. orbicularia, 1 mm. diam., haud papillulata, parenchymatice e cellulis 3 4 × 2-3 contexta, brunneola, ad marginem 30-50 μ late hyaline marginata; asci ovati vel ovato-globosi, 70-80 × 30-55, crassiuscule tunicati, 8-spori, aparaphysati J—; sporae oblongae, rectae vel inaequilateres, hyalinae, medio septatae, non constrictae, utrinque obtusae, 42-55 × 12-14.

Hab. in foliis Celtidis philippinensis (Ulmaceae), Los Baños, Laguna, Strombosiae philippinensis (Olacaceae), Mt. Maquiling Ins Philipp., Garciniae venulosae (Guttiferae), et Xanthophyllisp. (Polygalaceae), (C. F. Bakee). — Sec. v. Höhnel (Ber. Deutsch. Bot. Ges. 36., 1918, p. 312) Microthyriellae species haec ut synon. macrosporae v. Höhn. habenda.

# Sect. 3. Hyalophragmiae

- PHRAGMOTHYRIELLA v. Höhn., Fragm. z. Myk. XIV, 1912, n. 725.—
  Theiss. et Syd., Ann. Myc. XV, 1917, p. 431.— A gen. Micropeltis
  differt peritheciis contextu e cellulis parvulis non radiantibus nec
  marginem excedentibus composito; cetera conformia; a Microthyriella sporidia hyalophragmia.— Typ. gen. Phr. molleriana (Sacc.)
  v. Höhn., Phr. orbicularis (Zimm.) v. Höhn.
- 1. Phragmothyriella Bakeri Rehm, Ascom. Philipp. V, p. 2230 (1914) 5033 cfr. v. Höhn., Fragm. Mycol. p. 8.— Peritheciis gregariis, sessilibus, dimidiato-scutellatis, glabris, nigris, 200 μ diam., poro orbiculari 20 μ diam., lato pertusis, contextu pseudoparenchymatico fusco ex cellulis parvulis, non radiantibus nec marginem excedentibus formato; ascis clavatis 70 × 9, octosporis; sporidiis fusoideis, rectis, 5-septatis, non constrictis, hyalinis, distichis, 15-20 × 4; paraphysibus filiformibus.

Hab. ad folia Schizostach y i emortui (Graminaceae), et Eugeniae (Myrtaceae), Los Baños; Luzon ex Philipp. (REYES, BAKER).

- EREMOTHECELLA Sydow, Ann. Mycol. XV, 1917, p. 236. Thyriothecia irregulariter pseudoparenchymatice contexta, fuscidula, mycelio nullo; hymenia in quoque thyriothecio, monasca. Asci ovatoglobosi, aparaphysati. Sporidia oblongo-clavata, hyalina, transverse pluriseptata.
- 1. Eremothecella calamicola Syd., l. c. Thyriothecia epiphylla, dispersa vel laxe aggregata orbicularia, 400-800 μ diam., fuscidula, irregulariter parenchymatice contexta, marginem versus contexta plus minus radiante et dilutiore, saepe subhyalino, poro carentia; hymenia per totum thyriothecium dispersa, monoasca; asci subglobosi, 40-52 × 32-40, octospori; sporae oblongo-clavatae, immaturae breviores et 3-4-septatae, maturae longiores et 5-6-septatae, constrictae, rectae vel saepius leniter curvatae, cellula superiore et subinde etiam secunda plus minus majore, utrinque rotundatae, 28-35 μ longae, superne 9-11 μ latae, inferne 5-7 μ latae.

Hab. in foliis Calami sp. (Palmae), Mt. Maquiling, Laguna, Ins. Philipp. (C. F. BAKER). — Sec. v. Höhnel (Ber. Deutsch. Bot. Ges. 36., 1918, p. 312) est Lichen (— Arthoniopsis Müll., sec. Zahlbruckner

### Trib. 3. Plochmopeltineae

- PLOCHMOPELTIS Theiss., Broteria XII, 1914, fasc. 2., p. 87. Theiss. 5035 et Syd., Ann. Mycol. XV, 1917, p. 432. Mycelium reticulatum septatum, exhyphopodiatum, subhyalinum. Thyriothecia astoma, contextu floccoso-meandriformi. Hymenium monascum. Asci subglobosi aparaphysati. Sporidia hyalodidyma. Typ. gen. Pl. intricata (E. et M. ut Asterina) Theiss. 1. c.
- STOMIOPELTIS Theiss., Broteria XII, 1914, p. 85. Theiss. et Sydow, Ann. Mycol. XV, 1917, p. 432. A Plochmopeltis differt thyriotheciis poro centrali praeditis, hymenio polyasco, paraphysibus praesentibus. Sporidia hyalodidyma. Typ. gen. Stom. aspersa (Berk. ut Asterina) Th., l. c.
- STOMIOPELTELLA Theiss., Broteria XII, 1914, p. 86.— Theiss. et Syd., 5037 Ann. Mycol. XV, 1917, p. 432. Est Stomiopeltis paraphysibus destitutum. Typ. gen. Stom. nubecula (B. et C. ut Asterina) Th. l. c., St. patagonica (Speg. ut Microthyrium) Th., l. c.

chaetopeltopsis Theiss., Ann. Mycol. XI, 1913, p. 496. — Theiss. 5038 et Sydow, Ann. Mycol. XV, 1917, p. 432. — Mycelium reticulatum, pallide brunneolum, septatum, exhyphopodiatum. Thyriothecia contextu floccoso-meandriformi, brunnea, setulis acutis brunneis septatis praedita, poro centrali praedita. Hymenium simplex aparaphysatum. Asci ovato-clavati supra incrassati, octospori. Sporidia hyalina bilocularia. — Typ. gen. Chaet. tenuissima (Petch ut Asterina) Th., 1. c.

### GENERA INCERTAE SEDIS

ACTINOPELTE Sacc., Ann. Mycol. XI, 1913, p. 315 (Etym. actin radius et pelte scutum). — Perithecia superficialia, dimidiata, plano-convexa, membranacea, atra, poro pertusa, ambitu subcircularia, contextu eximie radiato, margine profunde fimbriato-fisso, cellulis furcatoramosis, marginalibus liberis et spinuliformibus, appressis. Asci pauci (6-9) breviter ovato-ellipsoidei, monospori, breviter crassiuscule stipitati. Sporidia ascum implentia, continua, nubilosa, subhyalina. — Notis datis et imprimis ascis majusculis, monosporis, genus, ut videtur, praedistinctum, etsi quoad sedem, paradoxum.

1. Actinopelte japonica Sacc., l. c. p. 315. — Characteres generis; pe-5039 ritheciis in maculis minutis subcircularibus pallidis epiphyllis paucis gregariis, punctiformibus, 220-240  $\mu$  diam., nigricantibus; perithecii contextus cellulis elongatis, 4-5  $\mu$  cr.; ostiolo circulari impresso; ascis 35-42  $\star$  28-33, episporio tenui levi 1  $\mu$  cr., pedicello crassiusculo tereti, asco breviore; sporidio ascum implente diu hyalino, demum dilute brunneolo.

Hab. in foliis nondum emortuis Castaneae vescae var. japonicae (Fagaceae), Japonia Prov. Mino, Kawauye-mure, Japoniae (K. HARA).

# PHAEOSCUTELLA P. Henn. - Syll. XVII p. 872.

1. Phaeoscutella maquilingiana Sacc., Notae Mycol. XXIII p. 62 (Acc. 5040 Ven.-trent. 1917). — Peritheciis late remotiuscule gregariis, opace nigris, convexulis, dimidiatis, astomis, 240 μ diam.; contextu radiato, fuligineo, ambitu fimbriato; ascis ovato-ellipsoideis, minutissimis, sessilibus, apice obtusioribus, aparaphysatis, octosporis, 16-18 × 14; sporidiis subtetrastichis v. conglobatis, teretiusculis, utrinque rotundatis, leviter curvis, 12 × 3, olivaceo-fuligineis, 3-septatis, non constrictis.

Hab. in vaginis emortuis Schizostachvi acutiflori (Graminaceae). M. Maquiling, ins. Philipp. (BAKER). - A typo generis contextu distincte radiato recedit.

- CHAETOPLACA Syd., Ann. Mycol. XV, 1917, p. 232 et p. 432,- Membranae superficiales, unistratosae, primitus continuae conidiferae tandem porose ruptae, contextu indistincte radiante, irregulariter pseudo-parenchymatico, setis numerosis rigidis obsitae: hymenia copiosa in quoque thyriothecio, monasca, membrana basali tenui. Asci plus minus aequaliter dispersi, clavati, 8-spori, aparaphysati. Sporae bicellulares hyalinae in maturitate ut videtur brunneolae.
- 1. Chaetopiaca Memecyli Syd., l. c., fig. 1. Membranae hypophyllae, 5041 dispersae, orbiculares, 1-2 mm. diam., omnino superficiales, fere atrae, sub micr. pallide fuscae, ad marginem subhyalinae, unistratosae. ex hyphis subradiantibus vel fere meandrice curvatis-3-5 µ cr. copiose septatis (articulis 4-9 u longis), contextae, setis numerosis rigidis erectis unicellularibus obscure brunneis plerumque irregulariter dispositis subinde etiam seriatim ordinatis 30-55 u long. inferne 3-4 µ cr. ad apicem acutis basi immersis ubique dense obsitae, primitus continuae, tandem, praecipue centro, porose ruptae; stratum hymeniale 50-80 u cr. hvalinum fibroso-gelatinosum, hymenia plurima monasca includens, membrana basali tenui hyalina; asci plus minus aequaliter denseque dispositi, clavati, 50-65 \* 16-19. ad apicem incrassati, ad basim breviter pedicellati v. subsessiles, octospori, aparaphysati; sporae distichae, obovato-ellipsoideae v. ovato-oblongae, ad apicem rotundatae, ad basim rotundatae v. leniter attenuatae, bicellulares, cellulis fere aequalibus non v. vix constrictae, leves, 16-18 \* 7-8, hyalinae, in maturitat verisimiliter brunneolae.

Hab. in foliis Memecyli sp. (Melastomataceae), Bataan, Ins. Philipp. (M. RAMOS).

- HORMOPELTIS Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII p. 84 (1912). - Perithecia dimidiato-scutata, subiculo plane destituta. Asci octospori, paraphysati. Sporidia linearia in articulos plures scissilia, hvalina. - Sec. Theiss. et Syd., Ann. Myc. XV, 1917, potius Scolecopeltopsis paraphysata.
- 1. Hormopeltis Bomplandi Speg., loc. cit., c. ic. Peritheciis saepis 5042 sime hypophyllis, copiose sparsis, discoideis, 400-500 µ diam., tenui-membranaceis, centro coriacellis, astomis, ambitu hyalinis anhystisque, matrici arcte adpressis; ascis obclavatis, medium supra

attenuatis apiceque crassiuscule tunicatis, basi rotundatis, subsessilibus,  $110 \approx 22,$  paraphysibus filiformibus parum longioribus cinctis; sporidiis cylindraceo-clavatis, 35-65  $\mu$  longis, apice 7-8  $\mu$  cr., basi tantum 3-4  $\mu$ , in articulos 9-11, magnitudine decrescentes, supremis ovalibus vel ellipsoideis, infimis subglobosis dissilientibus, hyalinis.

Hab. ad folia viva Strychni sp. (Loganiaceae), in dumetis prope Bompland, Misiones, Argentina.

- MYIOCOPRELLA Sacc., Notae Mycol. XX, in Nuovo Giorn. bot. it. 23., 1916, p. 199 (Etym. a Myiocopro cui affinis). Perithecia dimidiata, convexo-applanata, atra, subastoma; contextu duriusculo e centro radiato anguste prosenchymatico, ad marginem eroso-fimbriato pallido. Asci parallele stipati, obovati, exigui ex hypothecio tenuissime celluloso flavido nascentes, polyspori. Sporidia oblonga, hyalina. Imprimis ascis polysporis genus distinguendum videtur.
- 1. Mylocoprella Bakeri Sacc., l. c. Peritheciis amphigenis sed sae- 5043 pius hypophyllis, solitariis v. aggregatis, convexo-applanatis, rugulosis, aterrimis, 0,7-1 mm., margine fimbriato-subspinulosis; ascis obovatis, crasse (praecipue apice) tunicatis, 20-22 × 11-12, basi obtuse tenuatis, sessilibus, polysporis; sporidiis polystichis tereti-oblongis, utrinque obtusulis, 4-5 × 1, hyalinis.
  - . Hab. in foliis vivis v. languidis Aspidii sp. (Filices), Paete, Laguna, Ins. Philipp. Non inficior fungillum, mihi visum singularem, esse denuo inquirendum, nam specimina observata non prorsus matura videntur [P. A. Sacc.].

SACCARDINULA Speg., — Syll. IX p. 1071, XIV, p. 692, XVI p. 645, XXII p. 532.

1. Saccardinula xylosmicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5044 Buenos Aires XXIII (1912) p. 83. — Peritheciis amphigenis, saepius epiphyllis, sparsis, minutis, astomis, dimidiato-scutatis, 150-200 μ diam., margine longiuscule fimbriatis, atris, rigidulis, contextu centro indistincte parenchymatico, ambitu plus minusve manifeste prosenchymatico et pallidiore; ascis obovatis, 4-6 8-sporis, 50-60 × 30-40, cito diffluentibus ac muco densiusculo cinctis; sporidiis conglobatis, elongato-ellipsoideis, saepius leniter inaequilateris transverse 7-septatis, ad septa leniter constrictis, loculis paucis vel pluribus septo longitudinali continuo vel interrupto percursis, hyalinis, 35-45 × 12-19; loculis saepius grosse 1-guttatis

Hab. ad folia viva Xylosmae pubescentis (Flacourtiaceae), in dumetis prope Calilegua, Jujuy, Argentina.

- NIESSLELLA v. Höhn., Ber. deutsch. bot. Ges. XXXVI, 1918, p. 468.— 5045
  Subiculum nullum; perithecia contextu distincte radiato donata, supra laciniato-aperta et disco ascigero erumpenti praedita; excipulum praesens v. nullum. Paraphyses filiformes simplices. Asciclavati octospori. Sporidia elongata hyalina demum 2-(usque 4-1) locularia.— Typus gen. Niesslella scirpicola (Fuck. in Micropeziza) v. H. Sistit autem Niesslella aurantiaca (Rehm in Belonidium) v. H.
- ACTINOMYXA Syd., Ann. Mycol. XV, 1917, p. 146. Thyriothecia superficialia, simplicia, contextu prosenchymatico radiante mox hystolysis ope in corpuscula irregularia dissoluta, mycelio nullo. Asci cylindraceo-clavati, paraphysati, octospori. Sporidia clavulata, hyalina, transverse pluriseptata.
- 1. Actinomyxa australiensis Syd., l. c. Peritheciis hypophyllis, sparsis, punctiformibus, in tomento folii nidulantibus, superficialibus, atris, planiusculis, 300-350 μ diam., contextu opaco centrali mox histolysis ope in corpuscula irregularia, minuta v. majora dissoluta, peripherice dilutiora v. fere subhyalina ibique ex hyphis variae crassitudinis 3-6 μ cr. composita, articulis longiusculis; ascis copiosis, radiantibus, tereti-clavatis, ad apicem rotundatis, subsessilibus, v. brevissime pedicellatis, 56-65 × 8-10, octosporis, copiose paraphysatis; sporidiis distichis, clavulatis, hyalinis, ad apicem rotundatis, ad basim saepius leviter tenuatis, 3-septatis, non constrictis, 18-22 × 2-4.

Hab. in foliis Lasiopetali ferruginei, var. cordati (Sterculiaceae), in M. Wilson, Australiae (MAIDEN).

# Fam. 3. Dothideaceæ Nitschke \*)

Dispositio systematica (p. p. emendata) sec. Theiss. et Syd. in l. c.

# Subf. 1. Dothideaeae

Stroma prosenchymaticum v. plus minus parenchymaticum, nodulosum v. depressum, stratu superiori distincto destitutum, superficialiter hypostromate intramatricali praedito v. centro aduato v. immerso. Loculi rotundati stromate immersi.

<sup>\*)</sup> Conferenda est Monographia ell. F. Theissen et H. Sydow: Die Dothideales, Kritsch-systematische Originaluntersuchungen (Ann. Mycol. 13., 1915, p. 149). Opus mi-

#### Trib. 1. Coccoideae

### Stroma superficiale, centro immersum

- A. Stroma centro sterile, loculi circulariter distributi
  - 1. Sporidia unilocularia hyalina (etiam 4-loc.?). stromata levia, paraph. praes.

Yoshinagrila v. Höhn,

- 2. Sporidia brunnea bilocularia; stromata periphaerice hyphis tecta, paraph. praes.
  - a) Loculi rotundati periphaerice disjuncti
  - b) Loculi circulariter periphaerice confluentes

TRICHODOTHIS Th. et Syd. PERISCHIZON Svd.

### B. Stroma acqualiter fertile

- 1. Sporidia unilocularia
  - a) filiformia, hyalina, paraph. praes.
  - b) ellipsoidea, hyalina, paraph. nullae
  - c) ellipsoidea, brunnes, paraph. praes.

SCHWEINITZIELLA Speg. COCCOSTROMA Th. et Syd. AUERSWALDIELLA Th.-Syd.

- 2. Sporidia bilocularia
  - a) Sporidia inaequaliter septata; loculo inferiori papilliformi, hyalino, superiori brunneo ellipsoideo, paraph. praes.

Coccodiscus P. Henn.

- b) Sporidia subacqualiter divisa
  - 2 Sporid. hyalina, paraph. praes.
  - β Sporid, hyalina, paraph, nullae
  - γ Sporidia brunnea, paraph. praes.
- MICROCYCLUS Sacc.
- COCCOIDELLA V. H. COCCODOTHIS Th. et Syd.
- c Sporidia brunnes, paraph, nullae
- COCCODOTHELLA Th.etSyd.
- 3. Sporidia trilocularia, hvalina; paraph, praes.
- COCCODIELLA Hara
- 4. Sporidia quadrilocularia, hyalina; paraph. nullae ELMEROCOCCUM Th.et Syd.

### Trib. 2. Levelleae

Stroma superficiale, lata basi sessile; hypostroma intramatricale

- 1. Sporidia bilocularia hyalina; paraph. nullae
- MICROCYCLELLA Th.

- 2. Sporidia bilocularia brunnea
  - a) Paraph. praes., mycelium distinct. praes.
  - b) Paraph. praes., mycelium distinct. nullum

LEVEILLELLA Th. et Syd. ENGLERODOTHIS Th.et Syd.

crothecuicae exquisite paratum et magnae molis. Genera numerosissims (140!) in quae ab Auctoribus Familia (jam ex 16 generibus composita) haec discerpitur, plerumque fabrica stromatis, loculorum dispositione, etc. innituntur. Et idem dici potest de generibus Microthyriacearum et Hemihysteriacearum s. lato, quarum primitus vix 30 adnumerabantur, quae vero nunc Rev. Theissen ad circ. 100 elevat! An haec nova genera sint omnia justa et valida, futura aetas pronuntiabit (P. A. Saccardo in ms. 1917).

- c) Paraph. nullae; mycelium distinct. nullum
- d) Paraph. nullae; myc. nullum, stroma pilosulum
- 3. Sporidia filiformia

LEVEILLEINA Th. et Syd. DISCODOTHIS V. H. TRICHOCHORA Th.et Syd.

### Trib. 3. Dothideae

### Stroma innato - erumpens

- 1. Sporidia unilocularia
  - I. Sporidia hyalina
  - a) Sporidia incurvata (valsoidea)
  - b)
  - 0)
  - , paraph. nullae, stroma regu-

lar. pulvinatum

- e) Loculi distincti supra tantum confluentes
- II. Sporidia brunnea, paraph. nullae
- III. Sporidia bruunea, paraph, praes.
- 2. Sporidia bilocularia
  - hyalina, paraph. praes. a)
  - b) » , paraph. nullae
  - o) bruunea, paraph. nullae
  - » , paraph. praes. d)
- 3. Sporidia trilocularia, hyalina
- 4. Sporidia quadrilocularia hyalina, paraph. nullae
- 5. Sporidia quadrilocularia brunnea, paraph. nullae
- 6. Sporidia muralia brunnea, paraph. nullae

DOTHIDEOVALSA Sp.

ellipsoidea, paraph. praes., asci 3-spori ZIMMERMANNIELLA P.H.

» , asci 8-spori BAGNISIOPSIS Th. et Syd.

AMERODOTHIS Th.et Svd. CATABOTRYS Th. et Syd.

AUERSWALDIA Sacc.

DOTHIDINA Th. et Syd.

ULEODOTHIS Th. et Syd.

DOTHIDELLA Speg.

SYSTREMMA Th. et Syd.

ACHORELLA Th. et Syd.

METAMERIS Th. et Svd.

PHRAGMODOTHELLA Th.

et Syd.

PHRAGMODOTHIS Th.

et Syd.

DICTYODOTHIS Th. et Syd.

# Subf. 2. Phyllachoreae (Theiss. et Syd.)

Stromata subcuticularia v. epidermica, semper tecta, clypeo epidermali v. cuticulari praedita, prosenchymatico-dothideacea v. plus minus irregulariter hyphenchymatica. Loculi in stromate v. in mesophyllo nidulantes, apice clypeo connexi.

### Trib. 1. Trabutinae

Stroma inter cuticulam et epidermidem enformatum

- 1. Sporidia unilocularia
  - a) Sporidia hyalina; paraph. praes.
  - paraph. nullae
  - brunnea unilocularia; paraph. nullae

TRABUTIA Sacc .- Roum.

TRABUTIELLA Th. et Syd.

PHAROTRABUTIELLA Th.

et Syd.

- 2. Sporidia bilocularia
  - a) Sporidia hyalina, loculi inaequales; paraph. praes. MUNKIODOTHIS, Th. et Syd.

b) Sporidia hyalina, loculi inaequales; paraph.

c) Sporidia hyalina, loculi acquales : paraph.

d) Sporidia hyalina, loculi zequales; paraph. nullae

e) Sporidia brunnea; paraph. praes.

f). Sporidia brunnea; paraph. nullae

3. Sporidia trilocularia, brunnea; paraph. praes.

4. Sporidia quadrilocularia, hyalina; paraph. praes

OMPHALOSPORA Th. et Syd.

KEHMIODOTHIS Th. et Syd.

EURYACHORA Fuck. COCCOCHORA V. H. THYRIOPSIS Th. et Syd.

DERMATODOTHIS Rac.

CAMAROTELLA Th. et Syd.

### Trib. 2. Scirrhinae

Stroma subepidermicum

A. Stroma rotundatum v. irregulare, nec lineare; loculi poris distinctis praediti:

1. Sporidia unilocularia

a) Sporidia hyalina exappendiculata; parapu.

b) Sporidia hyalina exappendiculata; paraph.

c) Sporidia hyalina appendiculata; paraph. praes.

d) Sporidia brunnea; paraph. nullae

e) Sporidia brunnea; paraph. praes.

2. Sporidia bilocularia

a) Sporidia hyalina, loculi inaeq.; paraph. praes.

b) Sporidia hyalina, loculi aequ.; paraph. praes.

3. Sporidia 4-locul., hyal.; paraph. praes.

4. Sporidia filiformia; paraph. praes.

c) Sporidia brunnea; paraph. praes.

B. Stroma lineare rima elongata comuni apertum:

1. Sporidia bilocularia hyalina

a) Loculi spor. aequales; paraph, nullae-

b) Loculi ut supra; paraph. praes.

c) Loculi spor. inaequales; paraph. nullae

2. Sporidia 3-locularia; paraph. praes.

3. Sporidia 4-plurilocularia

a) Sporidia hyalina; paraph. praes.

b) Sporidia brunnea; paraph. praes.

c) Sporidia brunnea; paraph. nullae

Catacanmineae

CATACAUMA Th. et Syd.

CATACAUMELLA Th. et Syd.

SCHIZOCHORA Syd.

PHAEOCHORA V. H.

PHAEOCHORELLA Th. et Syd.

ANISOCHORA Th. et Syd.

PLACOSTROMA Th. et Syd.

PHAEODOTHIOPSIS Th.etSyd.

PHRAGMOCAUMA Th. et Syd.

SCOLECODOTHIS Th. et Syd.

Eu-Seirrhiineae

SCIRRHIA Nke.

SCIRRHODOTHIS Th. et Syd.

APIOSPORA Sacc.

SCIRRHOPHRAGMA Th. et Syd.

Exarmidium Kar.

RHOPOGRAPHUS Nke.

RHOPOGRAPHINA Th. et Syd.

### Trib. 3. Phyllachorinae

Stroma in mesophyllo immersum

1. Sporidia 1-locularia

a) Sporidia hyalina; paraph. praes.

PHYLLACHORA Nke.

b) Sporidia hyalina; paraph. nullae

c) Sporidia brunnea; paraph. praes.

2. Sporidia 2-locularia

 a) Loculi sporid. inasquales, loculo sup. hyalino; paraph. praes.

b) Locali ut supra; loc. sup. branneo, infer. papilliformi; paraph. praes.

b) Loculi sporid. aequales; sporid. hyal.; paraph. praes.

d) Loculi et sporidia ut supra; paraph. nullae

e) Sporidia brunnea; paraph. praes.

3. Sporidia 4-locularia

a) Sporidia hyalina; paraph. praes.

b) Sporidia hyalina; paraph. nullae

c) Sporidia brunnea; paraph. praes.

d) Sporidia brunnea; paraph. nullae

4. Sporidia muralia brunnea

a) Paraphys. nullae

b) Paraphys. praesentes

5. Sporidia filiformia

PHYLLACHORELLA Syd. SPHAERODOTHIS She.

STIGMOCHORA Th. et Syd.

COCCOCHORELLA V. H.

ENDODOTHELLA Th. et Syd.

OLIGOSTROMA Syd. PHARODOTHIS Syd.

TELIMENA Rac.

PHRAGMOCARPELLA Th.-Syd.

HOMOSTEGIA Fuck.

CLYPHOSTROMA Th. et Syd.

DICTYOCHORA Th. et Syd. DICTYOCHORELLA Th. et Syd.

OPHIODOTHELIA V. H.

# Subfam. 3. Montagnellaeae Th. et Syd.

Loculi distincti in mesophyllo immersi perithecioidei, stromate distincto destituti v. subhyphenchymatico tantum praediti, apice epidermide emergentes; v. in stromate basali insidentes, v. in stromate distincto solitarii.

### Trib. 1. Eu-Montagnellae

Loculi in mesophyllo immersi v. in stromate subcorticali distincte adnati, diu immersi v. prominuli;

1. Sporidia 1-locularia hyalina

 a) Loculi singuli in mesophyllo: stroma distinctum nullum; paraph, praes.

b) Loculi stromatici; paraph. nullae

2. Sporidia bilocularia

a) Sporidia hyalina; paraph. nullae; stroma distinct. nullum

 a) Loculi singuli disjuncti diu immersi apice nodulosi

β) Loculi conferti, emergentes, apice non incrassati

b) Sporidia hyalina; paraph nullae; stromatica

a) Loculi irregulariter distributi

HAPLOTHECIUM Th. et Syd. Montagnellina v. H.

HAPLODOTHIS V. H.

PSEUDOSPHAERELLA V. H.

DIPLOCHORELLA Syd.

β) Loculi circulariter dispositi

γ) Loculi lineariter dispositi

 sporidia brunnea; stroma dist. nullum; paraph. praes.

 d) Sporidia brunnea; stroma praesens; loculi irregular. distributi; paraph. nullae

 e) Sporidia, stroma et paraph. ut supra; loculi ramoso-radiantes

 Sporidia 4-locul. brunnea; paraph. praes.; stromatica

4. Ut supra; paraph. nullae

5. Sporidia muralia; stromatica

a) Sporidia hyalina; paraph. nullae

b) Speridia brunnea; paraph. praes.

c) Sporidia brunnea; paraph. nullae

6. Sporidia filiformia; paraph. nullae

CYCLODOTHIS Syd. SCIRRHIACHORA Th. et Syd.

PYRENOBOTRYS Th. et Syd.

CROTONE Th. et Syd.

TERATOSPHAERIA Syd.

SYNCARPELLA Th. et Syd. Montagnella Speg.

HYALOGURREYA Th. et Syd. CURREYA Sacc. EPIBOTHRYS Th. et Syd. OPHIOCARPELLA Th. et Syd.

#### Trib. 2. Rosenscheldlæ

Loculi superficiales, stromate basali adnati v. stromate proprio praediti.

1. Loculi stromate basali cuticula innato-insidentes

a) Loculi conferti; sporidia hyalodidyma; paraph. nullae

b) Sporidia phaeodidyma; caeterum ut supra

 c) Stromata unilocularia perithecioidea pede brevi innata; sporidia hyalodidyma; paraph. nullae

 Loculi distincti stromate erumpenti elongato exserti; sporid. 4-loc., brunnea; paraph. praes.

 Stroma cylindraceo-erumpens, supra loculis ramoso - congregatis praeditum; sporidia phaeodidyma; paraph. nullae ROSENSCHELDIELLA Th.etSyd. Licopolia Sacc. et Syd.

MONOPUS Th. et Syd.

ROSENSCHELDIA Sp.

STALAGMITES Th. et Syd.

#### GENERA EXCLUDENDA V. DUBIA:

Hyalodothis P. et Har. (enfr. Ann. Myc. 1914, p. 186)
Scirrhiella Speg. — Sphaeriaceae, Botryosphaeriae proximum
Curreyella Sacc. — Sphaeriales (Syn. Discostroma Clem.)
Darwiniella Speg. — Sphaeriales (Curreyellae proximum)
Diplotheca Starb. — Myriangium sec v. Höhn.
Oxydothis Pen. et Sacc. — Sphaeriales (Syn. Merrilliopeltis P. Henn.)
Kullhemia Karst. — Discomycetae
Plowrightiella Sacc. — f (Syn. Pleodothis Clem.)
Hypoxylonopsis P. Henn. — Valsaria
Eurytheca de Seyn. — Myriangiaceae

Gibellia Sacc. = Sphaeriales
Roussoella Sacc. = Didymosphaeria
Montagnina v. Höhn. = ? Cucurbitariaceae
Ophiodothis Sacc. = Hypocreac. p. p., typ. gen. = Balansia
Loranthomyces v. Höhn. = Trichothyriaceae
Myxodiscus v. Höhn.
Roumegueria Sacc.
Dichosporium Pat.
Alboffia Speg. = ? Corynelia
Pilgeriella P. Henn. = ? Perisporiaceae
Monographos Fuck. = Sphaeriales
Heterodothis Syd. = Lichen (Phylloporina)
Mazzantia Mont. = Hyponectricae (? Apiosphaeria)
Angatia Syd. = Myriangiaceae

#### Subf. 1. Dothideaeae

### Sect. 1. Hyalosporae

- AMERODOTHIS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 295.— Stroma erumpens dothideoideum, loculis immersis; ascis aparaphysatis, octosporis hyalinis. Typ. gen.:
- 1. Amerodothis Ilicis (Cke.) Th. et Syd., l. c., Bagnisiella Ilicis (Cke.) 5047 Sacc., Syll. II p. 590.
- 2. Amerodothis Uncariae Rac. in Th. et Syd., l. c., Bagnisiella Unca- 5048 riae (Rac.) Sacc. et Tr., Syll. XXII p. 408.
- 3. Amerodothis Jaglandis (Mont.) Th. et Syd., l. c., Botryosphaeria Ju- 5049 glandis (Mont.) Sacc., Syll. I p. 457.
- 4. Amerodothis Molluginis (v. Höhn.) Th. et Syd., l. c., Bagnisiella Mol- 5050 luginis (v. H.) Sacc. et Tr., Syll. XXII p. 408.
- CATABOTRYS Th. et Syd., Ann. Mycol. 13., 1915, p. 297. Stromata erumpentia, parenchymatica, inter singulos oculos subtus profunde incisa; loculis immersis. Asci aparaphysati octospori. Sporidia hyalina continua. Typus generis:
- 1. Catabotrys Palmarum (Pat.) Th. et Syd., l. c., cum icon., Bagnisiella 5051 Palmarum Pat., Syll. IX p. 1005.
- COCCOSTROMA Theiss. et Syd., Ann. Mycol. 12., 1914, p. 269; 13., 1915, p. 271. Stroma pulvinatum, superficiale, dothideoideum, centro affixum. Loculi immersi, rotundati, aequaliter distributi. Asci octospori, aparaphysati. Sporidia continua hyalina. Typ. gen.:

- 1. Coccostroma Machaerii (P. Henn.) Th. et Syd., l. c. = Phyllachora 5052 Machaerii P. Henn., Syll. XI p. 369.
- 2. Coccostroma Puttemansii (P. Henn.) Th. et Syd., 1. c. = Auerswaldia 5053 Puttemansii P. Henn., Syll., XVII p. 842.
- 3. Coccostroma palmigenum (Berk. et Curt.) Th. et Syd., l. c. = Bo-5054 tryosphaeria palmigena, Syll. XIV p. 525.

### Sect. 2. Phaeosporae

AUERSWALDIA Sacc. - Syll. II p. 626 et cfr. p. 461, IX p. 1031, XI p. 374, XIV p. 675, XVI p. 625, XVII p. 841, XXII p. 427.

1. Auerswaldia Gigantochloae Rehm, Ascomyc. Philipp V, Leaflets of 5055 Philipp. Botany, VI (1914) p. 2222. - Stromatibus innatis, orbicularibus dein striiformibus loculos 1-3, globosos, arcte adproximatos, 150 µ latos, papillulis minutis demum prominentes includentibus, per corticem stellatim vel rimose disrumptum conspicuis; hypostromate nigritulo sub cortice effuso; ascis clavatis, apice ro tundatis, crasse tunicatis, 90 100 × 20-30, paraphysibus filiformibus intermixtis; sporidiis distichis, oblongis, utrinque rotundatis, rectis, obscure fuscis.  $25-30 \times 12-14$ .

Hab. in culmo Gigantochloae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). - Hoc gen. spectant etiam Dothidea examinans (M. et B.) Sacc., Syll. II p. 626, et Bugnisiella oceanica (Ces.) Sacc., Syll. II p. 590.

2. Auerswaldia decipiens Rehm, Ascomyc. Philipp. III, in Philipp. Journ. 5056 of Sci. VIII (1913) p. 395. - Stromatibus peridermio innatis, intus carbonaceis, primitus dispersis dein plus minusve confluentibus, hemiglobose prominentibus, atris, nitentibus, 1-2,5 mm. diam.; loculis 2-4 innatis, globulosis, 0,5 mm. diam., papillulis minimis conoideis prominentibus; ascis cylindraceis, octosporis, 80-100 > 12, paraphysibus septatis 3-4 µ cr. obvallatis; sporidiis oblique monostichis, ellipsoideis, continuis, rectis, fuscis, 12-14 > 7-8.

Hab. in petiolis emortuis Arengae (Palmae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). - Ad Phaeochora von Höhn, pertinens; ab A. Arengae (Rac.) Sacc. et Syd. facile dignoscenda.

3. Auerswaldia Pandani Rehm, Ascomyc. Philipp. VI, Leaflets of Philip. 5057 Bot. VI (1914) p. 2273. — Stromatibus in epiphyllo haud decolorato gregariis, sessilibus, e basi discoidea hemisphaerico-conoideis, atris, nitidis, carbonaceis, loculos 2-4 includentibus, 0,5-2 mm. la-

tis, ostiolis papillulatis minimis superficiem stromatis subverrucosa reddentibus praeditis, demum circa loculos collabentibus, annulum latum nigrum formantibus; ascis evanidis; sporidiis ellipsoideis, rectis vel curvatulis, continuis, fuscis, 15 \* 7.8.

Hab. ad basim foliorum emortuorum P a n d a n i (Pandanaceae). Mt. Banahao, ins. Philipp. (C. F. BAKER).

- DOTHIDINA Theiss. et Syd., Ann. Mycol, 13., 1915, p. 302. Stromata foliicola, erumpenti subsuperficialia, dothideoidea, loculis immersis. Asci paraphysati octospori. Sporidia brunnea simplicia.
- 1. Dothidina felipponeana Sacc., Auerswaldia felipponeana Sacc., Ann. 5058 Mycol. XIII (1915), p. 130. - Stromatibus laxe gregariis v sparsis, epiphyllis, superficialibus globoso-pulvinatis, nigricantibus, e carnoso subcarbonaceis, 800-1000 u latis, supra convexo-applanatis. rimulosis, interdum 2-4 confluentibus; loculis pulpa stromatica. atra immersis, subglobosis, 160-170 µ diam., ostiolis parum emergentibus, nitidulis, ascis tereti clavatis, deorsum sensim tenuatis. apice rotundatis, 190.200 \* 18.20, octosporis, paraphysibus filiformibus, guttulatis 3-4 µ cr. hvalinis obvallatis; sporidiis distichis oblongo-ellipsoideis, utringue rotundatis, 19-24 × 8-11, e latere leniter depressis, farctis, subinde 2-guttatis, fuligineis.

Hab. ad folia languida v. emortua Palmarum, Montevideo. Paseo del Prado. - Verisimiliter affinis v. etiam synon. Dothidinae palmicolae (Speg.) (Doct. F. FELIPPONE).

- Hoc gen. spectant etiam sec. Th. et Syd.: Auerswaldia Leandrae Syd., Syll. XVII p. 842, A. Fiebrigii P Henn., Syll. XVII p. 842, A. Hirtellae P. Hen., Syll. XXII p. 428, A Miconiae P. Henn., Syll. XVII p. 841, A. disciformis Wint., Syll. IX p. 1033, A. palmicola Speg., Syll. IX p. 1031.
- AUERSWALDIELLA Theiss. et Syd., Ann. Mycol. 12., 1914, p. 278; 13., 1915, p. 272. - Stromata superficialia, dothideoidea, pede centrali innata, hypostromate subcuticulari. Loculis rotundis immersis. Ascis paraphysatis octosporis. Sporidiis continuis coloratis. Typ. gen.:
- 1. Auerswaldiella puccinioides (Speg.) Th. et Syd., l. c. = Auerswaldia 5059 puccinioides Speg., Syll. IX p. 1033 (Syn. Dothidea viridispora (Cke.) Berl. et Vogl., Syll. IX p. 1044, Bagnisiella Pruni P. Henn., Hedw. v. 48 (1908) p. 6: « Stromatibus amphigenis, innato-superficialibus, pulvinato-subglobosis, atris, granulato-rugulosis, 1-2 mm. diam.; loculis subglobosis, immersis, ostiolatis; ascis clavatis, vertice rotun-

datis. attenuato-stipitatis, octosporis, paraphysatis, 100-140 µ longis. p. sp. 60-70 × 15-25; sporidiis subdistichis, oblongo-ellipsoideis, hvalinis, continuis,  $16-18 \approx 6-7$ .

Hab, in foliis Pruni sphaerocarpae (Rosaceae), Serra da Cantareira, S. Paulo, Brasilia.

- BOTRYOCHORA Torrend, Broteria, Bot. v. XII, 1914, fasc. I p. 65 .-Stromata erumpentia, superficialia, turbinato-placentiformia, singula v. botryose aggregata, basi angustiore innata, atra; textura molliuscula, coriaceo-ceracea, crusta exteriori tenui atra, intus fumosobrunneola hyalinescente, cellulis polygonis seriatim dispositis seriebus parallelis e basi ascendenti divergentibus. Loculis immersis dothideaceis strato simplici. Conidia continua brunnea. Asci paraphysati, octospori; sporidia continua brunnea.
- 1. Botrvochora nigra (Torrend) Torr., l. c. p. 65 (Fungi sec. exs. 269), 5060 Megalonectria nigra, Bull. Jard. Bot. Bruxelles IV, 1., 1913, p. 8 .-Stromata saepius ad basim stilboidea 1-1,5 mm. lata, applanatoturbinata, in sicco saepe umbilicato-collabescentia, superficie submammillosa v. girose plicata, atra. Loculis periphericis unistratosis, immersis, ellipticis, conidiferis majoribus, 350 \* 280, asciferis minoribus 160-200 \* 100-130; conidiis in sterigmatibus brevibus simplicibus hyalinis oriundis, parietalibus, in toto loculo, continuis, ellipticis, primum hyalinis, dein fuligineis, 20-24 > 10-12, utrinque rotundatis; ascis clavatis, breviter pedicellatis parce paraphysatis octosporis, p. sp. 65-75 \* 16 18; sporidiis fusco-brunneis, continuis, ellipsoideis utrinque subacutatis rima longitudinali 18-22 \* 8-10 monostichis v. subdistichis.

Hab. ad cortices arborum, Kisantu, Congo (VANDERYST), Zumbo Mozambique (A. CRUZ). - Status conidicus verisimiliter sistit Stilbella cinerea Torr.

# Sect. 3. Hyalodidymae

PLOWRIGHTIA Sacc. — Syll. II p. 635, IX p. 1041, XI p. 376, XIV p. 680, XVI p. 628, XVII p. 845, XXII p. 429.

1. Plowrightia Pelvetiae Gonz. Fragoso, Mem. R. Soc. Españ. Hist. Nat. 5061 t. 11., 1919, 3., p. 110, fig. 2. - Stromatibus innatis, immersis, demum erumpentibus, atris, rugulosis, oblongis vel oblongo-elongatis vel irregularibus, 60-700 µ long., coriaceo-carbonaceis 1-3 plerumque 1-locularibus, loculis immersis, oblongo-conoideis (gen. Zi-

gnoellae in mentem revocantibus), loculis 70-140  $\mu$  in diam., ostiolo pertusis, proeminentibus; ascis clavatis, 36-52  $\times$  12-18, parietibus crassiusculis praeditis; apice rotundatis, breviter pedicellatis, paraphysibus numerosissimis, hyalinis, articulatis, filiformibus, flexuosis, simplicibus vel rarius ramosis, articulatis; sporidiis irregulariter distichis, subhyalinis, ovoideo-oblongis, 11-14  $\times$  5-7, 1-septatis, loculis inaequalibus, saepe 1-guttulatis vel granulosis sporidiis junioribus in muco evolutis.

Hab. in frondibus Pelvetiae canaliculatae Dec. et Thur. (Algae), prope Ramallosa Lourido, Pontevedra, Hispania (Prof. BESCANSA). — Verisimiliter eadem est ac Dothidella Pelvetiae Suth. quae anterior (de qua cnfr. s. l.)

2. Plowrightia Mereschkowskyi Vouaux, Bull. Soc. Myc. Fr. 1912, p. 194. — 5062 Stromatibus pulviniformibus immersis 2-3 mm. latis, e cellulis polygoniis 5-8 μ diam. efformatis; loculis irregulariter distributis 60-150 μ latis, primum clausis demum ostiolatis; ascis clavatis, breviter crasseque pedicellatis, apice rotundatis ibique tunica crassiori praeditis, 46-68 × 14-15, octosporis; paraphysibus agglutinatis, indistinctis; sporidiis distichis, plus minus ellipsoideo-elongatis v. ovoideis, hyalinis, uniseptatis, non constrictis, saepe biguttulatis, loculo inferiori angustiori et breviori, 12-18 × 5-6.

Hab. in thallo Aspiciliae hispidae Meresch. (Lichenes). Bogdo Astrakhan, Rossia (MERESCHKOWSKY).

3. Plowrightia Puiggarii Spegaz., Rel. Mycol. trop. etc., in Bol. Ac. Nac. 5063 Cienc. Cordoba, t. 23., 1919, Extr. p. 131. — Maculae nullae: stromata hypophylla depresso-subglobosa parva 0,5-1 mm. diam. sparsa v. laxe gregaria, atra glabra laevia; loculi periphaerici numerosi obovati 100 × 60; asci subobclavati breviter pedicellati, paraphysati, 70 × 12; sporae octonae hyalinae oblique distichae, subfusoideae v. fusoideo-subclavulatae, ad septum medium leniter constrictae, loculis subaequilongis, supero obtusiusculo infero acutiusculo, 16-18 × 4-5.

Hab. ad folia viva Rubiaceae frutescentis cujusdam, prope Apiahy, Brasilia (J: Puiggari).

PLEODOTHIS F. E. Clements, Genera of Fungi 1909, p. 49, 173. — 5064 Est *Plowrightia* polyspora. — Typus *P. polyspora* Bref., Syll. XI, p. 376. — Si hoc gen. validum, *Plowrightiella* (Sacc.) vocandum quia anterius (Syll. 1. c., ut Sectio).

MICROCYCLUS Sacc., Syll. XVII p. 844. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 276.

1. Microcyclus Walsurae Sydow, Ann. Mycol. XIII, 1915, p. 39. — Ma. 5065 culis nullis; stromatibus hypophyllis, singulis etiam epiphyllis, sparsis, solitariis vel binis trinis aggregatis, superficiali bus, atris, 500-700 μ latis, 180-210 μ altis, opacis, rugulosis, pede brevi, centrali 90-150 μ crasso innato suffultis, e cellulis 8-10 μ longis prosenchymatice contextis; loculis immersis, ca. 10-20 μ quoque stromate, aequaliter dispositis, 80-110 μ diam., lenissime tantum prominulis; ascis brevissime stipitatis, 50-65 × 13-17, octosporis, paraphysatis; sporidiis plerumque distichis, oblongis, hyalinis, utrinque rotundatis, medio 1 septatis, non constrictis, 18-22 × 5-6, loculo supero plerumque parum latiore.

Hab. in foliis Walsurae piscidiae (Meliaceae), Perade nyia, Ceylon (T. PETCH).

- MICROCYCLELLA Theiss., Ann. Mycol. 12., 1914, p. 68; Theiss et Sydow, l. c. 13., 1915, p. 283. Stromata superficialia, dothideoidea, lata basi sessilia, ex hypostromate intramatricali oriunda, coriaceocarbonacea; loculis immersis rotundatis. Asci aparaphysati octospori. Sporidia hyalodidyma. Typ. gen.:
- 1. Mycrocyclella nervisequia (v. Höhn.) Theiss., l. c. = Polystomella ner- 5066 visequia v. Höhn., Syll. XXII p. 522.
- **ULEODOTHIS** Theiss. et Syd., Ann. Mycol. 13., 1915, p. 305.— Stromata erumpentia, dothideoidea, loculis immersis. Asci paraphysati octospori; sporidia hyalodidyma. Typ. gen.:
- Uleodothis Balanseana (S., R. et B.) Th. et Syd. 1. c., Plowrightia ba-5067 lanseana Sacc., Roum. et Berl., Syll. IX p. 1041 (Syn. Phyllachora Nyctaginearum Speg., Syll. IX p. 1020, Dothidella Adenocalymmatis P. Henn., Syll. XIV p. 677).
- 2. Uleodothis Rhynchosporae (Rehm) Th. et Syd. l. c., p. 306 Lizonia 5068 Rhynchosporae Rehm, Syll. XVI p. 486 (Plowrightia Rh. v. Höhn.).
- 3. Uleodothis Pteridis F. L. Stevens, Bot. Gazette 69., 1920, p. 248, 5069 tab. XIII fig. 6-7. Maculis brunneis, aridis, 3-5 mm. diam.; stromatibus nigris ob perithecia rugosis, 1-2 mm. diam. in epiphyllo majoribus, subepidermicis sed plus minus profunde innatis, superficie rugosis, non clypeatis epidermide lacerata tectis; hyphis stromaticis parallele distributis; loculis numerosis 100 μ circ. diam., globulosis; ascis numerosis cylindraceis tetrasporis, 65 × 14; para-

physibus paucis inconspicuis, exilibus filamentosis; sporidiis hyalinis bilocularibus, oblongis,  $17.20 \times 4.5$ .

Hab. in frondibus Pteridii caudati (Filices), Maricao, Porto Rico. — Ob ascos tetrasporos praedistincta species?

- ULEODOTHELLA Sydow, Ann. Mycol. 18., 1920, p. 184. Ab Uleodothide differt sporidiis aequaliter septatis. — Typus gen.: U. Aphanes (Rehm sub Polystomella) Syd.
- 1. Uleodothella Aphanes (Rehm) Syd., l. c., Polystomella Aphanes Rehm, 5070 Syll. XVII p. 865. (Uleodothis Aph., Th. et Syd. Ann. Mycol. 13., 1915, p. 306).
- DOTHIDELLA Speg. Syll. II p. 627, IX p. 1036, XI p. 375, XIV p. 676, XVI p. 626, XVII p. 846, XXII p. 432. Syn. (sec. Th. et Syd., Ann. Mycol. 13., 1915, p. 307) Plowrightia Sacc.
- Dothidella Pelvetiae Sutherland in Trans. Brit. Myc. Soc. V, pt. I, 5071 1914, p. 154 (1915). Stromatibus sparsis, parvis, 210-650 μ diam., convexis, initio immersis, tandem in summa parte, atris; loculis immersis, subglobosis vel complanatis, 100 120 μ latis, 80-90 μ altis; ascis cylindraceis vel clavatis, octosporis, paraphysatis, 40-45 × 12-15; sporidiis distichis, ovoideis vel oblongis, hyalinis, 1-septatis, vix constrictis, episporio crasso, 12,5-15 × 5-6.

Hab. in thallo Pelvetiae canaliculatae (Algae), Orkney, Scotia. — Cnfr. Plowrightia Pelvetiae p. 544.

2. Dothidella Canarii Rehm, Ascomyc. Philipp. III, in Philipp. Journ. 5072 of Sci. VIII (1913) p. 398. — Stromatibus in maculis flavidulis folio innatis, in utraque pagina conspicuis, sparsis, orbicularibus, planis, atris, ca. 3 cm. latis, verruculosis, loculis plurimis globulosis; ascis clavatis, octosporis, 80 × 10; sporidiis distichis, fusiformibus, utrinque acutatis, medio septatis, non constrictis, hyalinis, 12-15 × 3-4.

Hab. in foliis Canarii villosi (Burseraceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER). — Verisimiliter eadem est ac *Phyllachora Canarii* P. Henn. (cnfr. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 517).

3. Dothidella vacciniicola Dearness et House, N. Y. St. Mus. Bull. n. 188, 5073 p. 43 (1916). — Stromatibus nodulosis, subglobosis, basi 1-2 mm. diam., 1-2 mm. altis, obscure branneis, corticem penetrantibus, demum cavis, subcarbonaceis; loculis periphaericis, plerumque stratum simplicem efformantibus, in quoque mm. 6 v. 7, ostiolis puncti-

formibus 120-150  $\mu$  latis 150  $\mu$  altis; ascis e linearibus subclavatis, apicibus subconiventibus, 75-90  $\approx$  6-7, paraphysibus linearibus 90-100  $\mu$ ; sporidiis hyalinis, submonostichis, parum conglobatis, uniseptatis,  $10-12 \approx 5-6$ .

Hab. parasitice in ramis vivis Vaccinii atrococci (Ericaceae), Biltmore, N. C., Amer. bor. (H. D. House).

4. Dothidella portoricensis F. L. Stevens. Bot. Gazette 69., 1920, p. 249, 5074 fig. 1, tab. XIII fig. 8-9. — Maculis linearibus amphigenis definitis 0,5-1 × 3-4 mm.; stromatibus linearibus ex epidermide parum elevatis (circ. 70 μ); loculis plerumque 5-seriatis, subglobosis 70 μ circ. diam.; paraphysibus nullis; ascis numerosis cylindricis, octosporis, 54 × 10; sporidiis e hyalinis dilute fumosis, uniseptatis, 17 × 3,5.

Hab. in foliis Gleicheniae sp. (Filices), Las Marias, Porto Rico. — A D. pteridophila Speg. caracteribus stromaticis diversa.

5. Dothidella Gigantochloae (Rehm) Theiss. et Sydow, Ann. Mycol. 13., 5075 1915, p. 320, Scirrhia Gigantochloae Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Bot. VI (1914) p. 2223. — Stromatibus in epiphyllo late subcinereo gregarie innatis, parallele striiformibus, oblongis, utrinque obtusis, rectis, 0,3-1 mm. long. 0,3-0,5 mm. latis, erumpentibus, nigris; loculis 100 μ latis, seriatis, minutissime ostiolatis; ascis clavatis, filiformi-paraphysatis, 60-65 × 14, in stipitem elongatis; sporidiis distichis, ellipsoideis, utrinque subacutatis, medio septatis, non constrictis, hyalinis, 12-15 × 6.

Hab. in foliis Gigantochloae Scribnerianae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

6. Dothidella flava F. L. Stevens, Bot. Gazette, 69., 1920, p. 250 fig. 5076 2-3. — Stromate e pallido flavo juventute rotundato senio lineari, 1,6 mm. longo 0,27 mm. lato, subepidermico, late erumpenti et elevato; loculis globulosis 60-70 μ diam. 1-v. 2 seriatis; ascis linearibus octosporis, 34-51 × 6; sporidiis hyalinis, bilocularibus, oblongis, 14 × 3,5. — Conidiis filiformibus 40 × 1,5 hyalinis uno cum stromate in acervulos v. in pycnidios efformatis.

Hab. in foliis Lithachnes pauciflorae (Graminaceae), Prujillo Alto, Mayaguez, Florida Adentro, in Porto Rico. — Color stromatum peculiaris et tunc fungus fere hypocreaceus, ceterum dothideaceus.

7. Dothidella? pakuri Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue 5077 nos Aires, XXIII (1912) p. 94. — Maculis epiphyllis, minutis, de-

terminatis, 1-3 mm diam., centro pallescentibus, ambitu fuscidulis; stromatibus hypophyllis, sparsis, epidermide laciniatim disrupta cinctis, suborbicularibus, parvis, 1-3 mm. diam., superne planis, non vel vix colliculosis, extus fuscis intus atris; contextu grosse parenchymatico, olivaceo, aegre perspicuo; loculis monostichis, subglobosis, minusculis, 50-60 µ diam., ostiolis latissimis, 25-30 µ diam., apertis, vix prominulis; ascis fusoideis, apice crassissime tunicatis, breviter crasseque pedicellatis, 50 × 10, aparaphysatis, per aetatem subdiffluentibus; sporidiis saepius distichis, elliptico-subclavulatis, utrinque obtusiusculis, medio 1-septatis, non vel lenissime constrictulis, loculo supero saepe nonnihil crassiore, 4-guttulatis vel non, rarius 4-blastis, hyalinis, 14-18 × 4-6, primo muco obvolutis.

Hab. in foliis vivis Rheediae brasiliensis (Guttiferae), prope Puerto Leon, Misiones, Argentina.

# Sect. 4. Phaeodidymae

DOTHIDEA Fr. — Syll. II p. 639, IX p. 1043, XI p. 377, XIV p. 680;
 XVI p. 628, XVII p. 852, XXII p. 435. — Cnfr. Theissen et Sydow, Ann. Mycol. 13., 1915, p. 328.

1. Dothidea tetraspora B. et Br. — Syll. II p. 640 — var. citricola Sacc., 5078 Philipp. Journ. of Sc. Manila, P. I, v. 18., 1921, p. 600. — Sporidis quam typo paullo brevioribus,  $16 \times 7$ , rufo-fuligineis, articulis subaequalibus; ascis  $70 \times 11-12$ .

Hab. in trunco emortuo Citri trifoliatae Fukien, Foochow, Cina (SKVORTZOW). — Species verisimiliter collecticia de qua cnfr. Theiss. et Sydow, Ann. Myc. 13., 1915, p. 336.

2. Dothidea Edgeworthiae H. et P. Sydow et Hara, in Sydow Ann. My-5079 col. XI, 1913, p. 267. — Stromatibus erumpentibus, sparsis v. aggregatis, minutissimis, 200-350 μ diam., atris, superficie leniter rugulosis; loculis paucis, 1-5 in quoque stromate; ascis cylindraceis, apice obtusis, deorsum in stipitem longum attenuatis, p. sp. 45-60 × 12-16, octosporis; paraphysibus numerosissimis ascos superantibus; sporidiis distichis, ellipsoideo-oblongis, utrinque rotundatis, medio 1-septatis et constrictis, fusco-brunneis, 13-16 × 6,5-7,5.

Hab. in ramis siccis Edgeworthiae Gardneri, Kawauye-mura prov. Mino, Japoniae (K. HARA). — Species ulterius inquirenda habitus Erikssoniae sed fabrica peritheciorum a Dothideaceis potius excludenda. Cnfr. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 340, cum icon.

- **SYSTREMMA** Theiss. et Syd., Ann. Mycol. 13., 1915, p. 330.— Stroma erumpens, dothideoideum, loculis immersis, ascis aparaphysatis octosporis. Sporidia phaeodidyma. Typ. gen.:
- Systremma natans (Tode) Theiss. et Syd., l. c., Sphaeria natans Tode 5080
   1791 (Syn. Dothidea Sambuci Fr., Syll. II p. 639). var. Viburni Jaap, Verh. Bot. Ver. Prov. Brandenb. 57. (1915) p. 12. A typo differt sporidiis magis scabris et matrice aliena.

Hab. in ramis exsiccatis Viburni Lantanae (Caprifoliaceae), in monte S. Salvatore pr. Lugano, Helvetia.

- 2. Systremma placenta Theiss. et Syd. nom. nov., l. c. p.  $334 = D_0$ . 508 thidea bullata Berk. nec Fries (Plowrightia bullata, Syll. II p. 637). Ad gen. Systremma, species complures adscriptae sunt quae in Theiss. et Sydow citantur.
- ACHORELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 340. Stromata erumpentia, dothideoidea loculis immersis. Asci paraphysati octospori. Sporidia phaeodidyma. Typ. gen.:
- 1. Achorella ametableta (Rehm) Th. et Syd., l. c., Dothidella ametableta 5082 Rehm, Syll. XIV p. 677.
- 2. Achorella Gastrolobii (P. Henn.) Th. et Syd. l. c., Lizoniella Gastro- 5083 lobii Sacc., Syll. XVII p. 661.
- 3. Achorella Centrolobii (P. Henn.) Th. et Syd., l. c., Dothidea Centro- 5084 lobii P. Henn., Syll. XVII p. 853.
- 4. Achorella juruana (P. Henn.) Th. et Syd., l. c., Dothidea juruana 5085 P. Henn., Syll. XVII p. 854.
- TRICHODOTHIS Theiss et Syd., Ann. Mycol. 12., 1914, p. 177; 13., 1915, p. 268. Stromata superficialia, centro innata, contextu dothideaceo brunneo, loculis immersis periphaericis, media sterilia, ad marginem superiorem hyphis radiantibus liberis coronata. Asci cylindraceo-ventricosi, paraphysati. Sporidia octona, didyma, fusca. Typ. gen.:
- 1. Trichodothis comata (Berk. et Rav.) Th. et Syd., l. c. = Asterina co- 5086 mata Berk. et Rav., Syll. I p. 49.
- PERISCHIZON Syd., Ann. Mycol. 12., 1914, p. 265; 13., 1915, p. 269.—
  Stromata superficialia, dothideoidea, pede centrali innata, glabra, medio sterilia, loculis periphaerice in annulum confluentibus; ascis paraphysatis octosporis; sporidiis phaeodidymis. Differt a Trichodothide loculis in annulum confluentibus. Typ. gen.:

- 1. Perischizon oleifolium (Kalch. et Oke.) Syd., l. c. = Dothidea olei- 5087 folia Kalch. et Cooke, Syll. II p. 642.
- COCCODOTHIS Theiss. et Syd., Ann. Mycol. 12., 1914, p. 271; 13., 1915, p. 279. Stromata pulvinata, centro affixa, contextu celluloso brunneo. Loculi immersi stipati. Asci paraphysati octospori. Sporidia phaeodidyma. Typ. gen.:
- 1. Coccodothis sphaeroidea (Cooke) Theiss. et Syd., l. c. = Dothidea 5088 sphaeroidea Cke., Syll. II p. 642.
- 2. Coccodothis euglypta (Mont.) Th. et Syd, l. c. = Phyllachora eu- 5089 glypta (Mont.) Sacc., Syll. II p. 600.
- COCCODOTHELLA Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 280.— Est Coccodothis paraphysibus destitutum. — Typ. gen.:
- 1. Coccodothella placida (Syd.) Syd., l. c. = Plowrightia placida Syd., 5090 Syll. XXII p. 430.
- EEVEILLELLA Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 284. —
  Stromata superficialia, dothideoidea, carbonacea, lata basi sessilia, ex hypostromate intramatricali per stomata erumpente oriunda, mycelio superficiali ramoso septato absque hyphopodiis. Loculis immersis lenticularibus. Ascis paraphysatis octosporis. Sporidia phaeodidyma. Typ. gen.:
- Leveillella Drimydis (Lév.) Theiss. et Syd., l. c. = Lembosia Drimydis 5091
   Lév., Syll. II p. 743 (Syn. Asterina compacta Lév., Syll. I p. 51).
- ENGLERODOTHIS Theiss et Syd., Ann. Mycol. 13., 1915, p. 285.— Stromata superficialia, dothideoidea, lata basi sessilia, mycelio superficiali libero nullo. Loculis immersis globulosis. Ascis paraphysatis octosporis. Sporidiis phaeodidymis. Typ. gen.:
- 1. Englerodothis kilimandscharica (P. Henn.) Theiss. et Syd., l. c. = Coc- 5092 conia kilimandscharica P. Henn., Syll. XIV p. 815.
- LEVEILLINA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 286. Stromata superficialia, dothideoidea, lata basi sessilia, ex hypostromate epidermali et subepidermali per stomata erumpenti oriunda, absque mycelio superficiali libero. Loculis immersis globulosis. Ascis aparaphysatis octosporis. Sporidiis phaeodidymis. Typ. gen.:
- Leveillina Arduinae (K. et C.) Theiss. et Syd., l. c. = Dothidea Ar- 5093 duinae Kalch. et Cke., Syll. II p. 642.

2. Leveillina endocrypta (Mont.) Th. et Syd., l. c. = Dothidella endo 5094 crypta (Mont.) Berl. et Vogl., Syll. IX p. 1037.

### Sect. 5. Hyalophragmiae

- YOSHINAGELLA v. Höhn. in Sitzungsb. Akad. Wiss. Wien CXXII, 1, p. 293 (1913). Etym. a T. Yoshinaga. Stromata epidermidi laxe adnata, plana, centro tantum incrassata, carbonaceo-cornea, in parte mediana sterilia. Loculi in circulo marginali dispositi. Asci octospori aparaphysati. Sporidia hyalina pluriseptata. Hypostroma in epidermide evoluto. Cnfr. Theissen et Sydow, Ann. Mycol. XIII, 1915, p. 265.
- 1. Yoshinagella japonica v. Höhn., loc. cit. Stromatibus epiphyllis, 50% sparsis, applanatis, 1-2,5 mm. latis, irregulariter rotundatis, margine parum lobulato, verrucis nitidulis in series 2-3 fere concentricas dispositis asperatis, atris, subcorneis sed fissilibus, inferne planis et epidermidi adhaerentibus, hypostroma centrale in epidermide penetrante praebentibus, contextu parenchymatico grosse-celluloso, in medio 300-350 μ crasso, in margine lato tantum 200-250 μ attingente; loculis in circulum dispositis, 160-200 μ, ostiolo non papillato pertusis; ascis cylindraceis, superne rotundatis, 110 × 10, basi in pedicellum 30 × 4-5 attenuatis, paraphysibus filiformibus, 1 μ cr., copiosis obvallatis; sporidiis monostichis, oblongo-subfusoideis, rectis vel parum curvatis, utrinque obtusulis vel acutiusculis, hyalinis, 18-24 × 5-6, 4-cellularibus, ut videtur, sed immaturis.

Hab. in foliis Quercus glaucae, in Japonia (Yoshinaga).

- ELMEROCOCCUM Theiss. et Syd., Ann. Mycol. 13., 1915, p. 282.— Stromata superficialia, dothideoidea, pede centrali innata. Loculi immersi rotundati aequaliter sparsi. Asci paraphysati octospori. Sporidia 4-locularia, hyalino-chlorina.
- 1. Elmcrococcum orbicula (Syd.) Sydow, l. c., Darwiniella orbicula Syd., 5096 Leafl. of Philipp. Bot. v. 4., 1911, art. 62 p. 1158. Stromatibus hypophyllis, sparsis, per epidermidem erumpentibus et subsuperficialibus, orbicularibus, pulvinatis, applanato-globosis, atris, 0-33-1 mm. diam., intus pallidioribus; loculis numerosissimis, omnino immersis, 110-175 μ diam., ascis clavatis, apice rotundatis, breviter pedicellatis, 50-70 μ longis, 14-76 μ latis, octosporis; sporidiis distichis, cylindraceo-fusoideis, leniter inaequilateris, utrinque acutis, 3-septatis haud constrictis, hyalino-chlorinis, 25-32 μ longis, 4-5 μ

latis; paraphysibus ascos superantibus, filiformibus, 1,5 cr.

Hab. in foliis vivis Cryptocaryae todayensis (Lauraceae), Todaya Ms. Apo, Distr. Davao ins. Mindanao in Philippin. (ELMER).

- METAMERIS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 342. Stromata erumpentia, dothideoidea, linearia, loculis immersis; asci paraphysati octospori; sporidia hyalina biseptata. Typ. gen.:
- 1. Metameris japonica (Syd.) Syd. in l. c., Monographus japonicus Sydow, Ann. Mycol. 10., 1912, p. 408. Stromatibus gregariis, parallelis, sub epidermide formatis, linearibus v. lanceolatis <sup>3</sup>/<sub>4</sub>·1 mm. long., circiter 0,1 mm. latis non v. vix confluentibus, atris, epidermide medio longitudinaliter fissa cinctis; loculis ca. 8-16 in quoque stromate, conidiis, uni-vel biseriatim dispositis, globulosis, ostiolis distinctis papillulatis erumpentibus, 100-150 μ long. 80-120 μ latis; ascis cylindraceis, sessilibus, 40-70 × 7-9, octosporis; sporidiis distichis v. subdistichis, oblongo-cylindraceis, utrinque obtusis, primitus 1-, dein cellula superiore saepe iterum 1-septatis, hinc 2-septatis, non v. vix constrictis, rectis v. subrectis, hyalinis, 10-14 × 3-4, loculis inaequalibus, loculo medio plerumque leniter crassiore.

Hab. in stipitibus Os mundae regalis var. japonicae (Filices), prov. Mino Kawauye-mura, Japonia (K. HARA).— Mon. microsporo Niessl proximus.

- PHRAGMODOTHELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 343.—
  Stroma erumpens, dothideoideum, loculis immersis. Asci aparaphysati, octospori. Sporidia hyalina, triseptata. Typ. gen.:
- Phragmodothella Kelseyi (Ell. et Ev.) Th. et Syd., I. c., Homostegia 5098 Kelseyi El. et Ev., Syll. IX p. 1050.
- Phragmodothella globulosa (C. et M.) Th. et Syd., l. c., Darwiniella 5099 globulosa (E. et M.) Sacc., Syll. IX p. 1049.

# Sect. 6. Phaeophragmiae

- PHRAGMODOTHIS Theiss. et Syd., Ann. Mycol. 12., 1914, p. 178; 13., 1915, p. 344. Stroma erumpens, dothideoideum, loculis immersis. Asci aparaphysati, octospori. Sporidia brunnea triseptata.
- Phragmodothis asperata (Sydow) Syd., Ann. Mycol. 13., 1915, p. 345. 5100
   Montagnella asperata Syd., Ann. Mycol. X, 1912, p. 442. Stromatibus sparsis v. aggregatis, erumpenti-superficialibus, subglobosis

v. hemisphaerico-globosis, 1,5-3 mm. diam., pulvinatis, atris, ob loculos prominulos granulosis, contextu distincto e cellulis 15-19  $\mu$  long. composito; loculis monostichis, in parte superiore stromatum sitis ad tertium usque prominulis, ovato-subconicis, 150-200  $\mu$  diam., nucleo albo farctis; ascis clavatis, saccatis v. clavato-cylindraceis, sursum attenuatis, sed ad apicem rotundatis et crasse tunicatis, 140-200  $\times$  16-32, 6-8-sporis; sporidiis oblique monostichis, distichis v. in asci parte inferiore saepe etiam tristichis, subfusoideis, utrinque leniter attenuatis, sed apicibus rotundatis, primo hyalinis, tandem opace brunneis, 4-septatis, ad septum medium plerumque valde constrictis, 26-52  $\times$  9-11, verrucis distinctis dense asperatis; paraphysibus nullis v. indistinctis.

Hab. ad corticem Euphorbiae sp. (Euphorbiaeae), Wagen-padsnek distr. Pretoria, Transvaalia, Africa austr. (P. J. PIENACER).

#### DOTHIDEOF SELLA v. Höhn. - Ubi ?

1. Dothideopsella salicella v. Höhnel, Ann. Mycol. 18.; 1920, p. 80.— 5101 Stromatibus e cortice erumpentibus, gregariis, plerumque lineariter dispositis, elongatis v. rotundatis, uni-v. plurilocularibus, 360-500 μ long., 250 μ circ. altis; loculis rotundatis, 180-200 μ latis, 160 μ altis, apice depresse ostiolatis, ostiolo 30 μ lato. Stromate extus parenchymatico e cellulis 80-10 μ cr., intus 8-12 μ efformato; paraphysibus praesentibus; ascis numerosis, cylindraceo-clavatis, circ. 84 × 7, octosporis; sporis in asco brunneolis, singulis subhyalinis, fusoideis, apice obtusulis, plurilocularibus, 19-23 × 3-3,5; loculo superiori secundo parum latiori.

Hab. in ramulis Salicis sp. (Salicaceae), Tullnerbach Wienerwalde, Austriae (v. Höhnel).

## Sect. 7. Phaeodictyae

DICTYODOTHIS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 346. — Stroma erumpens, dothideoideum, loculis immersis. Asci aparaphysati octospori. Sporidia brunnea muralia. — Typ. gen.:

- 1. Dictyodothis Berberidis (Rehm) Theiss, et Syd., l. c., Curreya Berbe- 5102 ridis Rehm, Syll. XVI p. 632.
- 2. Dictyodothis excavata (Cke et Ell.) Th. et Syd., l. c., Curreya exca- 5103 vata (Cke et Ell.) Sacc., Syll. II p. 652.

# Sect. 8. Scolecosporae

- TRICHOCHORA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 289. Stromata superficialia, dothideoidea, lata basi sessilia, hypostromate sparso subcuticulare v. epidermali, hypothecio et interiore laeticolore molliusculo tenaci. Loculis rotundis immersis sparsis. Ascis paraphysatis octosporis. Sporidiis filiformibus, hyalinis, articulatis.
- 1. Trichochora marginata (Theiss.) Th. et Syd., l. c., Ophiodotis margi 5104 nata Theiss., Ann. Mycol. X, 1912, p. 10, cum icon. - Theissen, Decad. Fl. Bras. n. 249. - Amphigena, in hypophyllo fortius evoluta et confluens; stromate dimidiato (subtus non evoluto), superficiale, maculas irregulares sistenti, scruposo-colliculoso, extus brunneo v. atro margine griseo-cincto, intus in sectione rubro brunneo, fere carbonaceo, ex hyphis dense intertextis, ca. 300 u cr., crusta pseudoepidermali ca. 35 µ crassa, pluriloculare; peritheciis sparsis v. contiguis, globosis, parietibus propriis indistinctis ex hyphis densius intricatis, collo perbrevi crustam epidermalem perforantibus ca. 170 u diam.; ascis clavato-cylindricis, breviter pedicellatis, 75-100 × 8.9, p. sp. 65-75 μ longis, apice rotundatis, crassiuscule tunicatis; sporis filiformibus, parallelis, septatis, hyalinis (fasciculatis flavo-viridulis) longitudine ascorum p. sp.

Hab. ad folia fruticis cujusdam, Sao Leopoldo Rio Grande do Sul, Brasilia (RICK).

- CASTAGNELLA Arnaud, in Bull. Soc. Mycol. Fr. 1914, p. 357 (Etym. a cl. mycologo gallico Castagne). - Parasitica in Ascomycetibus. Stroma (proprium pro parte) subplanum vel hemisphaericum, coriaceo-carbonaceum, nigrum, intus fuscum. Loculis immersis ostiolo minuto papillato. Ascis elongato-clavatis, paraphysatis, octosporis. Sporidiis fusoideo-falcatis, septatis, hyalinis.
- 1. Castagnella coccifera Arnaud, 1. c. p. 358, t. XIX. Caract. gen. 5105 Loculis 250-300 \( \mu\) diam.; ascis 120 \( \infty\) 11, sporidiis 1-septatis, 50-55 \*3-4. — Pycnidiis globoso piriformibus 170 μ diam.; sporulis fusoideo-falcatis, 1-septatis, hyalinis,  $45-50 \times 3-3,5$ .

Hab. parasiticum in Henriquesia cocciferae, Montpellier, Gallia merid.

# Subfam. 2. Phyllachoreae

#### Sect. 1. Hyalosporae

HALSTEDIA F. L. Stevens, Bot. Gazette 69., 1920, p. 253. - Stroma superficiale non radiatum loculigerum. Asci octospori; sporidia hyalina v. subhyalina continua.

1. Halstedia portoricensis F. L. Stevens, l. c., tab. XIV fig. 18-19. 5106 Stromatibus amphigenis sed in epiphyllo copiosioribus, atris, depressis, 1-4 mm. diam., superficie demum corrugata v. centro quandoque elevata, superficialibus non radiatis; loculis usque 400 µ latis. 160 u altis; ascis octosporis cylindraceis, 68-85 > 14; sporidiis ovoideis, continuis, hyalinis v. pallide stramineis, 17 × 10.

Hab. in foliis Sideroxylonis foetidissimi (Sapotaceae). Quebradillos. Porto Rico.

TRABUTIA Sacc. — Syll. I p. 449, IX p. 601, XI p. 293, XVI p. 463, XVII p. 587, XXII p. 90 (ubique inter Sphaeriaceas).

1. Trabutia Lonicerae Rac. in Theiss. et Syd., Ann. Mycol. 13., 1915, 5107 p. 356. - Stromatibus epiphyllis atro-piceis, prominentibus, e rotundo subangulosis, 1 mm. latis, 280 µ altis, basi planis, ostiolis peritheciorum 5-8, minutis, non extantibus signatis, subcuticularibus, parietibus homogeneis, contextu e cellulis verticalibus conflato; loculis globosis v. ovoideis v. globoso-depressis, 130-200 u diam.; ascis tereti-clavatis apice rotundatis, deorsum sensim tenuatis, 110-130 × 16-20, paraphysibus filiformi-clavatis obvallatis, 8-sporis, sporidiis continuis, hyalinis, levibus, anguste ovoideis, utrinque lanceolato-acutatis, rectis, 20-24 > 4-5.

Hab. in foliis Lonicerae javanicae (Caprifoliaceae), M. Pangerango, 3025 m. alt., Java (RACIBORSKI).

2. Trabutia Conzattiana Sacc., Ann. Mycol. 10., 1912, p. 310. — Theiss. 5108 et Syd., Ann. Mycol. 13., 1915, p. 356, tab. III, fig. 19. — Maculis stromaticis epiphyllis, crebris, ex orbiculari angulosis, 2-3 mm. diam. brunneis, hypostromate tegente atro-brunneo submembranaceo margine eroso; peritheciis paucis, hypostromati adnatis, globoso-hemisphaericis, nitide nigricantibus, 170-190, rarius usque ad 300 µ diam., obtuse papillato-ostiolatis, contextu pachydermatico, atro, distincte pseudoparenchymatico; ascis breviter crasseque oblongofusoideis, sessilibus, utrinque tenuatis sed summo apice truncatis,

 $65-70 \times 26\cdot 28$ , paraphysibus filiformibus saepe tortuosis, initio mucoso-coalitis obvallatis, 6-8-sporis, saepius 6-sporis; sporidiis oblongo-fusoideis, subtristichis,  $30 \times 9-10$ , inaequilateris, utrinque abrupte acuminatis, fulvo-flavidis intus minutissime granulosis, apicibus subhyalinis.

Hab. in foliis languidis Quercus sp. (Cupuliferae), Oaxaca Mexici (Cassianus Conzatti e Civezzano tridentino, horti botanici Oaxacensis director. Comm. Doet. S. Bonansea). — A Trabutia quercina mox dignoscitur ascis crassioribus et brevioribus (non 100  $\times$  18) sporidiis utrinque vere acutis, fulvo-lutescentibus, intus minutissime granulosis apicibus achrois.

3. Trabutia Conocephali Racib. in Theiss. et Syd., Ann. Mycol. 13., 1915, 5109 p. 350. — Epiphylla, sparsa, nigro-picea, subrotundo-subangulosa, 2-6 mm. lata, convexo-applanata, 0,5 mm. alta, subcuticularis, contextu stromatis e cellulis verticalibus, nigricantibus, angustis conflato, loculis subglobosis, v. depresso-globosis, 0,5 mm. diam.; ascis paraphysatis, apice rotundatis, deorsum tenuatis, 8-sporis, 80 × 15; sporidiis ovoideis, levibus, monostichis, 12-14 × 7, continuis, hyalinis.

Hab. in foliis Conocephali suaveolentis (Moraceae), pr. Tjibodas in M. Gedah Javae, frequens (RACIBORSKI).

4. Trabutia Elmeri Theiss. et Syd., Ann. Mycol. 13., 1915, p. 353. — 5110 Stromatibus tantum epiphyllis in maculis decoloratis parum distinctis insidentibus, irregulariter sparsis, non v. vix greges efformantibus, 1-2 mm. diam. confluendo usque 6 mm. diam., ambitu rotundatis v. irregularibus, omnino subcuticularibus, superficie nigris undulatis; loculis depresse globosis v. lenticularibus 350-500 μ latis 150-220 μ altis; pariete basali nulla; ascis paraphysatis, clavatis, 75-90 × 14-16, octosporis, sporidiis monostichis v. distichis, oblongis, utrinque rotundatis, unilocularibus hyalinis 14-17 × 6,5-8. — Loculis conidiferis depressis; conidiis subfalcato-incurvatis, unilocularibus hyalinis, angustissimis, 14-17 × 0,75.

Hab. in foliis Fici banahaensis (Moraceae), Todaya M. Apo, Mindanao, Ins. Philipp. (ELMER).

5. Trabutia benguetensis H. S. Yates, Philipp. Journ. Sc. XII (1917), 5111 p. 374. — Stromatibus hypophyllis, irregulariter dispersis, 1 mm. diam., vel congregatis, 3-6 mm. diam., rotundatis, atris; loculis applanatis, 450-500 μ diam., 60-70 μ altis; stroma opaco 30-35 μ crasso, interiore, ex hyphis obscure brunneis 3-4 μ crassis formato; ascis oblongo-ovatis 40 × 15, octosporis, paraphysatis; sporidiis distichis,

subglobosis, 1-cellularibus, hyalinis, 6 × 5.

Hab. in foliis Fici benguetensis (Moraceae), Benguet Luzon, Ins. Philipp. — Imprimis sporidiis minutis a congeneribus ficicolis distinguitur.

6. Trabutia vernicosa Theiss. et Syd., Ann. Mycol. 13., 1915, p. 353.— 5112 Stromatibus epiphyllis, dense sparsis, saepius 2-4 mm. diam., raro 1 mm., alte convexis, atro-nitentibus, ambitu circulari, subcuticularibus; contextu ex hyphis parallelis, rufo-brunneis, 8-10 μ cr., prosenchymaticis conflato; loculis depresso-globosis, 200-350 × 150-200; clypeo solido, opaco 40-55 μ cr.; ascis clavatis, typice paraphysatis, 45-55 × 12-16, octosporis; sporidiis monostichis v. distichis, ovato-ellipsoideis, hyalinis, continuis, 10-12 × 7-9.

Hab. in foliis Fici heterophyllae (Moraceae), Mindoro, ins. Philipp. (E. D. MERRILL).

7. Trabutia nervisequens (Lingelsh.) Theiss. et Syd., Ann. Mycol. 13., 5113 1915, p. 353, Phyllachora Schweinfurthii P. Henn. var. nervisequens Lingelsh., Engl. Bot. Jahrb. 39., 1907, p. 604. — Stromatibus epiphyllis in maculis decoloratis vix perspicuis ad nervos tantum evolutis insidentibus, plus minus elongatis confluentibusque, 1-2 cm. long., nitidis, subcuticularibus; loculis paucis v. numerosis, depressis, variabilibus, intus ex hyphis subparallelis 7-9 μ cr. prosenchymatice efformatis, 400-600 μ latis, 250-300 μ altis; clypeo 40-60 μ crasso, opaco; ascis cylindraceis, pedunculatis, paraphysatis, 75-110 × 11-14; sporidiis plerumque monostichis, late ellipsoideis, hyalinis, unilocularibus, 12-16 × 8-10.

Hab. in foliis Fici Hochstetteri var. glabrior (Moraceae), Godaburka Abyssinia, Africa (F. Rosen).

8. Trabutia Fici-Dekdekenae Bacc., F. Etiopici n. '86, in Ann. di Botan. 5114 XIV, 1917, p. 135. — Stromatibus epiphyllis in maculas amplas lobatas vel irregulariter reticulato-rugulosas, planas vel depresse pulvinatas ac atras secus nervos lineariter productas, loculis conicis 450 μ latis 234 altis, intus albo-farctis, atris contiguis vel saepius sparsis, ascis octosporis cylindrico-clavatis, brevissime pedunculatis, 64 × 11, aparaphysatis, sporis ellypticis hyalinis granulatis 12-15 × 9,6 distichis.

Hab. in foliis Fici Dekdekeuae (Moraceae), secus flum. Haddas, Assaorta, Erythraea, Africa (PAPPI). — Tr nervisequens valde affinis.

9. Trabutia Fici-Hochstetteri Bacc., F. Etiopici n. 87, in Ann. di Botan. 5115 XIV, 1917, p. 135. — Saccardo, Notae Mycol. XXII, 1917, p. 189,

n. 160. — Amphigena sed praesertim epiphylla: stromatibus subcuticularibus hypophyllis minutis, sparsis vel gregariis ad 2 mm. latis, saepe in maculas irregulariter reticulatas confluentibus; stromatibus epiphyllis late crustosis ambitu irregulariter lobato, secus nervos saepe productis; impresso-punctatis multilocularibus, loculis crebris 450  $\mu$  latis 350  $\mu$  altis, ostiolo minuto perforatis; ascis clavatis 110-120  $\approx$  16, paraphysatis; sporidiis hyalinis ellipsoideis monostichis 14  $\approx$  8.

Hab. in foliis Fici Hochstetteri (Moraceae), Decamaré, Acchelé Guzai, Erythraea (BALDRATI). — Sec. Saccardo l. c., ascis  $85.95 \times 7.5.9$  v. usque 14  $\mu$ , sporidiis  $11.5.13 \times 8$ .

10. Trabutia Sycomori Baccarini, Eumyc. Somalia it., in « Missione 5116 Stefanini-Paoli » Firenze 1916, p. 196. — Stromatibus amphigenis minutis 1-2 locularibus, tunc sparsis, tune in greges parvos subrotundos 2-4 cm. diam. appropinquatis, rarius confluentibus; loculis 470 μ latis, 200-300 μ altis minute papillosis, ascis clavatis breviter pedicellatis octosporis paraphysatis 80 × 12-18; sporis, ellipsoideis vel rotundis 9 × 12, monostichis vel interdum distichis.

Hab. in foliis Fici Sycomori (Moraceae), Afgoi Somalia it., Africa trop. (PAOLI).

11. Trabutia Evansii Theiss. et Syd., Ann. Mycol. 13., 1915, p. 352.— 5117 Stromatibus tantum epiphyllis, in maculis vix decoloratis v. brunneolis insidentibus, parvis, rotundatis, 1 mm. diam., in greges 0,5-1 mm. diam. plus minus regulariter congestis sed non v. vix confluentibus; folium saepe late tegentibus, subcuticularibus, ex hyphis griseo brunneis parallelis 4-5 μ cr. efformatis; clypeo 50-80 μ cr opaco; loculis 300-450 μ latis, 150-240 μ altis; aseis cylindraceis, paraphysatis, 70-90 \* 10-16; sporidiis distichis v. inordinatis, ellipsoideis utrinque rotundatis, unilocularibus, hyalinis, 11-14 \* 8-9,5.

Hab. in foliis Fici sp. (F. Caricae prox.) (Moraceae), Lourenco Marques, Africa lusitanica (leg. C. W. HOWARD comm. J. B. POLE EVANS).

12. Trabutia Butleri Theiss. et Syd., Ann. Mycol. 13., 1915, p. 354.— 5118 Stromatibus epiphyllis irregulariter sparsis, in greges 1-2 cm. lat. dispositis, 1 mm. diam. v. confluendo 2-3 mm. plano-convexis, vix nitidis, sinuatis, subcuticularibus; contextu ex hyphis parallelis 4-6 μ cr.. brunneolis, prosenchymaticis conflato; sursum atro, 30-50 μ crasso; loculis 300-400 × 150-200; ascis tereti-clavatis, paraphysatis, 70-80 × 10-15, octosporis; sporidiis 1-2-seriatis, oblongo-ellipsoideis, continuis, hyalinis, 13-16 × 6.

Hab. in foliis, infra paullulum dealbatis, Fici sp. (Moraceae), Wahja in Assam, Bengala (leg. A. L. Som, com. BUTLER).

13. Trabutia novoguineensis Theiss. et Syd., Ann. Mycol. 13., 1915, p. 5119 354. — Stromatibus epiphyllis, supra vix maculiferis, infra flavorubefacentibus, late sparsis, atro-nitidis, suborbicularibus, 2-5 mm. diam., v. confluendo 2-5 mm. latis v. elongatis 8 mm. usque, subcuticularibus, contextu ex hyphis parallelis 5-8  $\mu$  cr. brunneis conflato; clypeo 40-60  $\mu$  cr., firmo, opaco; loculis valde inaequalibus, 300-400  $\times$  120-180; ascis cylindraceis, paraphysatis, 60-85  $\times$  12-14; sporidiis monostichis, ellipsoideis, v. ovoideis, late rotundatis, continuis, hyalinis, 10-11  $\times$  8-9.

Hab. in foliis Fici sp. (Moraceae), Kelano, Nova Guinea (KÄ-RNBACH).

14. Trabutia inimica Theiss. et Syd., Ann. Mycol. 13., 1915, p. 354.— 5120 Stromatibus epiphyllis, dense dispositis, folium supra dealbantibus, infra brunneo-rubefacientibus, ex orbiculato conoideis, 0,6-0,8 mm. diam., 350-400 μ altis, saepius confluentibus, nigris, vix nitentibus, subcuticularibus; contextu ex hyphis rufo-brunneis, 8-10 μ cr. remote (40-50 μ) articulatis demum stratum minute parenchymaticum formantibus conflato; loculis majusculis, depresse ellipsoideis, 550-650 × 280-350; ascis tereti-clavatis, paraphysatis, 60-70 × 10-14; sporidiis octonis, transverse monostichis, continuis, hyalinis, oblongis utrinque rotundatis, 17-19 × 6, rectis.

Hab. in foliis indeterminatis (Fici sp.?), Congo, Africa (VANDERYST).

15. Trabutia chinensis Yates, Philippine Journ. of Sc. C. Bot., 1917, 5121 v. XII, n. 5, p. 314 (corr. T. chinense). — Stromatibus epiphyllis, in maculis decoloratis 1-2 mm. diam. insidentibus, solitariis v. aggregatis et tunc greges convexulos atros irregulares usque 1 cm. diam. efformantibus; loculis 1-3, lenticularibus, 250-400 μ' diam. 100-125 μ alt.; ascis clavatis apice rotundatis, octosporis, 60-70 × 18-20, breviter stipitatis, paraphysibus filiformibus circumdatis; sporidiis oblique 1-2 distichis, ellipsoideis, unilocularibus, hyalinis, 16-18 × 8-9.

Hab. in foliis Fici sp. (Moraceae), Loh Fam (Lofaushan), Kwangtung Prov., China austr. (MERRILL).

16. Trabutia portoricensis F. L. Stevens, Bot. Gazzette 70., 1920, p. 5122 401, fig. 3. — Stromatibus in maculis subcircularibus dense insidentibus, maculis primum pallidis demum aridis et brunnescentibus; clypeo in epiphyllo prominenti nigro 80-95 μ diam., ostiolo

centrali 10-15  $\mu$  diam., loculis in mesophyllo immersis; ascis irregularibus tenuiter tunicatis, octosporis,  $68 \approx 17$ , paraphysatis; sporidiis inordinatis, filiformibus, oblongis, obtusis, continuis, hyalinis,  $24 \approx 7$ .

Hab. in foliis Cocolobis nive a e (Polygonaceae), Mayaguez, Porto Rico.

17. Trabutia Escalioniae (P. Henn.) Th. et Syd., Ann. Mycol. 13., 1915, 5123 p. 351, Phyllachora Escalloniae P. Henn., nec. Pat., in Rehm Hedwigia 40., 1901, p. (104) et Ascomyc. n. 1384. — Stromatibus irregulariter rotundatis, parum elevatis 160-180 μ altis 1,5-2 mm. latis inter cuticula et epidermide nidulantibus, contextu intus pallide flavo-brunnescenti subplechtenchymatico, supra minute parenchymatico e cellulis 3,5-4 μ er. parietibus brunneis donatis efformato; loculis parietibus propriis nullis praeditis, depresse globosis, sparsis, 120-140 μ latis 85-100 μ altis. Sterilis.

Hab. in foliis Escalloniae rubrae (Saxifragaccae), Lacus Quillen, Rep. Argentina (F. W. NEGER).

TRABUTIELLA Theiss. et Syd., Ann. Mycol. 12., 1914, p. 180; 13., 1915, p. 359. Est *Trabutia* paraphysibus destituta.

1. Trabutiella congregata Syd., Ann. Mycol. 15., 1917, p. 223. — Stro-5124 mata 1-locularia in greges orbiculares vel parum elongatos 1-3 mm. longos dense disposita, subcuticularia, minuta, 120-190 μ diam., convexa, nitida, clypeo atro usque 20 μ crasso, membrana basali plana tenuissima; asci sessiles, plerumque saccati, ad apicem plus minusve incrassati, 100-160 × 40-60, aparaphysati, 8-spori; sporae ellipsoideae, continuae, utrinque rotundatae, hyalinae, 32-38 × 18-20, distichae vel conglobatae.

Hab. in foliis Heterospathae sp. (Palmae), Bulusan Volcano prov. Sorsogon, Luzon, Ins. Philipp. (M. RAMOS).

CATACAUMA Theiss. et Syd., Ann. Mycol. 12., 1914, p. 280; 13., 1915, p. 371. — Stroma applanatum, inter epidermidem et stratum subepidermalem, clypeo epidermali tectum, verticaliter prosenchymatice constructum (typice); loculi immersi; asci paraphysati octospori; sporidia hyalina simplicia.

Catacauma Ocoteae F. L. Stevens, Bot. Gazette 69., 1920, p. 251.— 5125
 Maculis irregularibus rotundatis 0,5.1 cm. diam. et ultra fere indefinitis utrinque visibilibus brunnescentibus; stromatibus rotundatis numerosis, sparsis, suora applanatis infra cupulatis, 1-1,5

mm. diam.; elypeo hypophyllo raro epiphyllo expanso 60-110, infra cupulatis, 1-1,5 mm. diam.; elypeo hypophyllo raro epiphyllo expanso 60-110  $\mu$  crasso; loculis numerosis 300  $\mu$  diam., irregularibus; ascis 4-8 sporis, 85-102  $\times$  7, angustis, infra longe sterilibus; paraphysibus filiformibus obvallatis, sporidiis unilocularibus, hyalinis, oblongis, 14-20  $\times$  3,5.

Hab. in foliis Ocoteae leucoxylonis (Lauraceae), Mt. Alegrillo, Porto Rico.

2. Catacauma Acaciae Theiss. et Syd., Ann. Mycol. 13., 1915, p. 389.— 5126 Stromatibus epiphyllis numerosis, hypophyllis paucioribus, ambitu circularibus, 0,4-0,5 mm. latis, hemisphaerico-convexis, sordide nigris, tantum vertice nitidulis, unilocularibus, subepidermicis, 130-180 μ altis, stromate clypeiformi, hypothecio hyalino, fibroso; loculo cavitatem totam implente; ascis paraphysatis, cylindraceis, stipitatis, 80 × 8-10, p. sporif. 55-60 μ longa; sporidiis monostichis, ellipsoideis, hyalinis, continuis, utrinque rotundatis, 10-12 × 5-6.

Hab. in foliis Acaciae leucophloeae (Leguminosae), Madras, Ind. orient. (W. Mac RAE).

3. Catacauma Dussiae Sydow, Ann. Mycol. 18., 1920, p. 159. — Stro-5127 mata semper epiphylla, per totam folii superficiem plus minus dense distributa, rotundata, 0,5·1 mm. diam., valde convexa, atra, nitida, subepidermalia; loculi 250·400 μ lati, 200·250 μ alti, strato basali 15·20 μ crasso brunneo, clypeo epidermali crasso opaco usque 40 μ; asci cylindraceo-clavati, copiose paraphysati, octospori, 60·70 × 14·20; sporae 1·2-stichae, oblongae, utrinque obtusae, hyalinae, 15·20 × 5·6.

Hab. in foliis Dussiae martinicensis (Leguminosae), Guadalupa (Duss).

4. Catacauma Pterocarpi (Syd.) Syd., Ann. Mycol. 13., 1915, p. 387, 5128 Phyllachora Pterocarpi P. et Syd. Ann. Mycol. X, 1912, p. 40. — Stromatibus epiphyllis, sparsis, minutis, rotundatis v. irregularibus, <sup>3</sup>/<sub>4</sub>-2 mm. diam., atris nitentibus; loculis parum prominulis 3-10 in quoque stromate, rotundatis, 150-200 μ diam.; ascis cylindraceoclavatis v. clavatis, apice rotundatis, 45-80 × 15-25, octosporis; sporidiis oblique monostichis usque irregulariter distichis, late ellipsoideis, utrinque rotundatis, continuis, hyalinis, 14-18 × 8-11.

Hab. in foliis Pterocarpi angolensis (Leguminosae), Letaba Drift, Zoutpansberg, Transvaal (E. M. Doldge), Pt. saxatilis, Java, Pt. indici, Ins. Philippinis. — Cum Phyll. Pterocarpi Rehm comparanda (cnfr. Phyllachora) nec non cum Placostroma Pterocarpi (Mass.) Th. et Syd.

5. Catacauma valsiforme (Rehm) Theiss. et Syd., Ann. Mycol. 13., 1915, 5129 p. 379, Phyllachora valsiformis Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of Sci. VIII (1913) p. 398. — Stromatibus in maculis dilutissime flavidulis hypophyllis, in epiphyllo vix conspicuis adnatis, singularibus, dein 3-10 gregariis, orbicularibus, atris, nonnullis demum in maculis atramentose nigris interdum circularibus confluentibus, 1,5-2,5 mm. latis, in corumque centro convexo, demum dilute albidulo, late nigro-marginato papillulis loculorum 2-5 innatorum protuberantibus obsessis; ascis clavatis, aparaphysatis, octosporis, 60 × 15; sporidiis distichis, oblongis, rectis, utrinque obtusis, biguttatis, hyalinis, 12 × 6.

Hab. in foliis Fici crassitorae, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER). — Ph. circinatae proxima, quae vero stromatibus epiphyllis gaudet.

6. Catacauma Garciae Theiss. et Syd., Ann. Mycol. 13., 1915, p. 381.— 5130 Stromatibus epiphyllis in areis viridulis, obsoletis, infra vero prominentibus 1-2 cm. latis 4-10 insertis, in greges irregulares, subinde concentricos digestis, non v. vix confluentibus, 1-3 mm. longis, 1-2 mm. lat., plerumque 2-3-locularibus; clypeo epidermico opaco, 50-65 μ cr., contextu parallele prosenchymatico, hyphis brunneis 4-5 μ cr.; loculis depresso-globosis, 300-380 × 150-220, maturitate vertice cum clypeo dehiscentibus; ascis octosporis, breviter stipitatis, 50-60 × 12-16; sporidiis oblongis utrinque obtuse tenuatis, continuis, hyalinis, 14-17 × 6-6,5.

Hab. in foliis Fici Garciae, Puerto Princesa, ins. Palawan ex Philipp. (ELMER).

7. Catacauma lagunense (Syd.) Syd. in Th. et Syd., Ann. Mycol. 13., 5131 1915, p. 378, Phyllachora lagunensis Syd., Enum. Philipp. Fungi I, in Philipp. Journ. of Sci. VIII (1913) p. 278. — Maculis epiphyllis, rotundatis, fuscidulis, 3.8 mm. diam., leniter depressis; stromatibus hypophyllis, nunquam epiphyllis, in greges maculis oppositos densiuscule distributis, minutis, non vel vix confluentibus, 0,5-1 mm. diam., rotundatis, convexis, centro nitidis, intus paucilocularibus; ascis cylindraceo-clavatis, 60-80 × 8-12, octosporis; sporidis subglobosis vel late ellipsoideis, continuis, hyalinis, 9-11 × 7-9.

Hab. in foliis vivis Fici Hauili (Moraceae), Luzon, Prov. Laguna, ins. Philipp. — Ph. apoensi Syd. affinis; differt stromatibus dense aggregatis et sporidiis minoribus.

8. Catacauma sanguinéum (Rehm) Theiss. et Syd., Ann. Mycol. 13., 1915, 5132

p. 379, Phyllachora circinata Syd. — Syll. XXII p. 421 — var. sanguinea Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. Botany, VI (1914) p. 2274. — Stromatibus epiphyllis in maculis discoidalibus sanguineis, 5 mm. usque latis et in hypophyllo conspicuis innatis.

Hab. in Fico heterophylla, Los Baños, ins. Philipp. (BAKER).

Catacauma Elmeri Syd. in Theiss. et Syd., Ann. Mycol. 13., 1915, 5133
 p. 378, Phyllachora Elmeri Syd., Leafit. Philipp. Bot. 1911, Art. 62,
 p. 1157 et in l. c.; Philipp. Journ. of Sc. 1913 (C) n. 4 p. 278.—
 Stromatibus epiphyllis, in hypophyllo haud conspicuis, sparsis, minutis, rotundatis, 0,5-1 mm. diam., atris, intus 1-paucilocularibus; ascis clavatis vel clavato-saccatis, breviter pedicellatis, 40-60 μ lon. gis, 11-18 μ latis, octosporis; sporidiis monostichis vel irregulariter distichis, subglobosis vel late ellipsoideis, continuis, hyalinis, 10-14 μ longis, 8-10 μ latis.

Hab: in foliis vivis Fici manilensis et F. blepharostomae, Todaya, Ms. Apo, Distr. Davao, ins. Mindanao in Philipp. (ELMER).

10. Catacauma microcentum (B. et Br.) Theiss. et Syd., Ann. Mycol. 5134
13., 1915, p. 384 — var. graphica Th. et Syd., l. c. p. 385, tab. VI
fig. 6. — Phyllachora microcenta B. et Br., Syll. II p. 595. — Stromatibus epiphyllis, crebris, 0,5-1 mm., lineatis v. breviter extantibus, v. impressis, minute anulatis; loculis 400-500 \* 250-350; sporidis
13 \* 6-6,5.

Hab. in foliis Fici mysorensis, Mysore, Ind. orient. (BUTLER).

11. Catacauma nipponicum Sydow, Ann. Mycol. XIII, 1915, p. 40 et 5135 p. 379. — Stromatibus epiphyllis, singulis etiam hypophyllis, plus minus dense sparsis vel irregulariter distributis, non vel vix confluentibus, rotundatis, ca. 1 mm. diam., valde convexis. usque 200 μ altis, atris, nitidulis, 1-vel paucilocularibus, subepidermalibus, clypeo 25.35 μ crasso; loculis lenticularibus, 90-100 μ altis, usque 400 μ longis; ascis clavatis, 44-60 × 12-15, paraphysatis, octosporis; sporidiis oblique monostichis vel distichis, continuis, ellipsoideis, hyalinis, obtusis, 12-16 × 5,5-7.

Hab. in foliis Fici nipponicae, prov. Iden, Amayi, Japonia (M. SHILLI).

12. Catacauma apoense (Syd.) Syd., Ann. Mycol. 13., 1915, p. 379, 5136

Phyllachora apoensis Syd., Leafit. Philipp. Bot. IV, 1911, art. 62,

p. 1157. — Stromatibus hypophyllis, in epiphyllo haud conspicuis; sparsis, rotundatis vel irregularibus, 0,5-2 mm. longis, atris, intus paucilocularibus; ascis clavatis vel clavato-saccatis, breviter pedicellatis, 50-75  $\mu$  longis, 11-18  $\mu$  latis, octosporis; sporidis irregulariter distichis vel oblique monostichis, ellipsoideis, continuis, hyalinis, 14-18  $\mu$  longis, 7-9  $\mu$  latis.

Hab. in foliis Fici sibulanensis et F. appensis, Todaya Ms. Apo, Distr. Davao, ins. Mindanao in Philippinis (EL-MEE).

13. Catacauma urophyllum (v. Höhn.) Th. et Syd., Ann. Myc. 13., 1915, 5137 p. 382, cum icon., Phyllachora urophylla v. Höhn. Fragm. zur Mykol.772, in Stzgsb. Akad. Wiss. Wien CXXI, 1, p. 390, fig. 2 (1912).— Stromatibus hypophyllis, linearibus, nervos tegentibus ideoque interdum ramosis, 700 μ usque latis, 250 μ crassis, superne convexis inferne concavis, nitidis, ob ostiola verruculoso-punctatis, contextu violaceo-atro, minute parenchymatico; loculis longitudinaliter seriatis, 300-600 μ longis, 159 μ crassis, 400 μ usque latis; ascis elavatis subsessilibus, tenuissime tunicatis, 60 × 10-16, paraphysibus filiformibus copiose obvallatis; sporidiis monostichis vel irregulariter dispositis, breviter oblongo-cylindraceis, utrinque late rotundatis, medio subconstrictis, intus granulosis, hyalinis, 12-15 × 6-6,5.

Hab. in folis vivis Fici urophyllae, Tjibodas, Java. (Rehm, Ascomyc. exs. n. 1947).

14. Catacauma maquilingianum Syd., Ann. Mycol. 14., 1916, p. 364.— 5138 Stromatibus semper epiphyllis, partibus foliorum maculiformiter decoloratis brunneolis vix determinatis insidentibus, sparsis, rotundatis, 1-2,5 mm. diam., discretis raro binis confluentibus, atris convexis, nitidulis, sub epidermide evolutis; loculis 1-3 in quoque stromate, depresso globosis, 250 450 μ latis, 170-250 μ altis, parietibus lateralibus et basali ca. 10 μ crassis; clypeo 30-40 μ crasso, opaco, aterrimo; contextu stromatibus ex hyphis 5-6 μ crassis olivaceovel fumoso-brunneolis composito; ascis oblongis vel clavatis, paraphysatis, 55·70 × 18 22, octosporis, J —; sporis 1-2-stichis, ovatis vel late ellipsoideis, utrinque late rotundatis, continuis, hyalinis, 12-15 × 8-9.

Hab. in foliis Fici sp., in summo vertice M. Maquiling, ins. Philipp. (C. F. BAKER).

Catacauma Ravenalae (Pat. et Har.) Theiss. et Syd., l. c., Phylla-5139 chora Ravenalae Pat. et Har., Bull. Soc. Mycol. Fr. 28., 1912, p. 283. — Maculis nullis; stromatibus epiphyllis elongato-ellipsoideis,

bullaceis, nitentibus, atris, usque 15 mm. longis, 3-5 mill. latis, loculis 3-7; ascis clavatis, brevissime stipitatis,  $50-60 \times 25-30$ , octosporis filiformi-paraphysatis; ascosporis subdistichis, hyalinis, eguttulatis, ovoideis, utrinque acutiusculis,  $12-14 \times 5-8$ .

Hab. in foliis Ravenalae madagascariensis (Musaceae), Ste-Marie de-Madagascar (BOIVIN).

16. Catacauma palmicola F. L. Stevens, Bot. Gazette, 69., 1920, p. 251, 5140 tav. XIII fig. 10-12. — Stromatibus subepidermicis, supra conspicuis infra minutis, nigris, nitidis, ovoideis,  $1.6 \times 1.3$  mm., 300  $\mu$  cr., superficie rotundatis sparsis, solitaris v. gregariis et plus minus confluentibus; maculis effusis brunneis; loculis irregularibus 500-600  $\mu$  latis contextu infra hyalino, tenui, lateraliter brunneo crasso: elypeo nigro, 60-100  $\mu$  cr.; ascis numerosis octosporis, saccatis, tenuiter tunicatis; sporidiis inordinatis, cylindraceis, 23-43  $\approx$  12-14, hyalinis, continuis.

Hab. in foliis Thrinacis ponceanae (Palmae), Vega Baja, Porto Rico.

17. Catacauma cubense Theiss. et Syd., Ann. Mycol. 13., 1915, p. 391. — 5141 Stromatibus epiphyllis, circinatis, atro-nitidis, minutis, hemisphaericis, ambitu irregulariter circulari, levibus, 0,3-0,5 mm. lat. unilocularibus v. confluendo bilocularibus et tunc ellipsoideis, zona stromatica depressa, atra, 1 mm. lata cinctis; loculis 370 × 180-200, tenuiter tunicatis; ascis clavatis, parce paraphysatis, breviter stipitatis, 70-80 × 15-20; sporidiis distichis, oblongo-ellipsoideis, hyalinis, utrinque rotundatis, 16-18 × 8.

Hab. in foliis Sapindace ae cujusdam, Cuba (WRIGHT, F. Cub. n. 865, sub nom. Doth. repens Berk.).

18. Catacauma Patouillardi F. Theiss., Verh.-zool.-bot. Ges. Wien Bd. 5142 69., 1919, p. 13 (nom. nov.) — Syn. Stigmatula nitens (Pat.) Syd. — Syll. XVI p. 454. — Ita vocanda quia jam extat Catacauma nitens (Lév.) Th. et Syd. 1916.

CATACAUMELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 400. — Est Catacauma paraphysibus destituta. — Typ. gen.:

- Catacaumella Miconiae (P. Henn.) Theiss. At Syd., I. c., Phyllachora 5143
   Miconiae P. Henn., Syll. XI p. 371.—Syn. Phyll. Henningsiana Sacc.,
   Ann. Mycol. 1913, p. 547, Physalospora pelladensis P. Henn.
- Catacaumella Gouaniae F. L. Stevens, Bot. Gazette, 69., 1920, p. 252, 5144
   tab. XIII fig. 14-15. Plerumque epiphylla raro hypophylla. Maculis stromata vix excedentibus infra vix visibilibus; stromatibus

copiosis subrotundatis 2-3 mm. diam., rugosulis, nitide nigris subepidermicis; loculis latis, depressis, 500  $\mu$  latis 150-160  $\mu$  circ. altis, solitariis v. aggregatis in quoque stromate distincte ostiolatis; ascis tenuifer tunicatis, irregularibus octosporis, 61-68  $\star$  10-11 inordinatis; sporidiis hyalinis unilocularibus ovoideis v. piriformibus, irregularibus 14-20  $\star$  10; paraphysibus nullis.

Hab. in foliis Gouaniae polygamae (Rhamnaceae), Mayaguez, Salinas, Dos Bocas, Maricao, G. lupuloidis, Arecibo Lares, Porto Rico.

- SCHIZOCHORA Syd., Ann. Mycol. 11., 1913, p. 265, et in Leaflets of Philipp. Bot. VI (1913) p. 1929 Theiss. et Syd., Ann. Mycol. 13., 1915, p. 401. Etym. schizo, findo et achor, ulcus. Est Catacauma paraphysata, sporidiis hyalinis continuis utrinque appendiculatis praedita.
- 1. Schizochora Elmeri Syd., loc. cit. Stromatibus hypophyllis, in epi-5145 phyllo maculas obsoletas atro-fuscas efficientibus, in hypophyllo zona angusta flavidula cinctis, sparsis, hemisphaerico-prominentibus, rotundatis vel ellipticis aut oblongis, subinde etiam angulatis, 1-1,25 mm. diam., usque ad 1 mm. altis, atris, opacis, irregulariter rimose dehiscentibus; loculis 1 4 in quoque stromate, 200-300 μ diam.; ascis clavatis, apice rotundatis, sessilibus, 55-75 × 15-20, octosporis; paraphysibus numerosis, filiformibus, ca. 1 μ crassis, tandem mucosis; sporidiis distichis, oblongo-fusoideis, continuis, utrinque attenuatis, primitus minute granulosis, hyalinis, 17-20 × 6,5-8, utrinque appendicula hyalina tenui 2-4 μ longa praeditis.

Hab. in foliis vivis Fici Guyeri (Moraceae), Dumaguete, Negros Oriental, ins. Philipp. (A. D. E. ELMER).

PHYLLACHORA Nits. — Syll. II p. 594, IX p. 1006, XI p. 368, XIV p. 663, XVI p. 617, XVII p. 828, XXII p. 410.

1. Phyllachora atro-maculans H. et P. Sydow, Ann. Mycol. XI, 1913, 5146 p. 264; Fungi exot. ext. 132. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 477. — Stromatibus spermogonicis amphigenis, maculis atro-fuscis orbicularibus v. irregularibus 0,5-1 cm. diant. insidentibus, in maculis irregulariter v. circinatim dispositis, in utraque foliorum pagina leniter prominulis, rotundatis, 1/8.3/4 mm. diam., atris, opacis; loculis paucis (1-4) in quoque stromate, globulosis; sporulis filiformibus, hyalinis, tenussimis, 18-35 × 0,5-0,7, irregulariter curvatis; stromatibus peritheciigeris conformibus, sed minus

opacis et subinde leniter nitentibus; ascis clavatis, 80-110 \* 12-18, filiformiter paraphysatis, octosporis; sporidiis oblique monostichis usque distichis, ellipsoideis v. oblongis, utrinque obtusis v. parum attenuatis, continuis, intus pluriguttulatis, hyalinis, 15-21 \* 7-8.

Hab. in foliis vivis Anonae sp. (Anonaceae), San Josè, Costa-Bica (A. Tonduz).

2. Phyllachora maquilingensis Sydow, Ann. Mycol. 18., 1920, p. 100.— 5147 Maculae propriae nullae; stromata in epiphyllo conspicua, per totam folii superficiem dispersa, hinc inde pauca aggregata, minuta, usque 250 μ diam., nitidula, 1-locularia, clypeo epiphyllo crasso atro, hypophyllo minus evoluto; loculus usque 200 μ latus, totam folii crassitudinem occupans; asci cylindracei, apice obtusi, ca. 80 × 10-14, octospori paraphysati; sporae ellipsoideae, continuae, obtusae hyalinae, 11-14 × 6-7; conidia in stromatibus similibus aequaliter 1-locularibus oriunda, continua, oblonga, utrinque obtusa vel etiam leniter attenuata, saepe etiam uno apice late obtusa, altero acutata, hyalina, copiose evoluta, 12-16 × 4-5.

Hab. in foliis Polyalthiae spec. (Anonaceae), Mt. Maquiling, prov. Laguna, Ins. Philippin. (T. Collado).

3. Phyllachora maculicola Syd., Ann. Mycol. 14., 1916, p. 83. — Macu-5148 lis distinctissimis, amphigenis, primitus ochraceis, dein exsicuando albido-ochraceis vel albidis, sparsis, orbicularibus, 0,5-1 cm. diam.; stromatibus in utraque foliorum pagina visibilibus, aggregatis, sed haud confluentibus, minutissimis, punctiformibus, 0,25-0,4 mm. diam in epiphyllo nitidis, in hypophyllo opacis, leniter tantum convexis, loculum singulum includentibus; clypeo in utraque epidermide, 20-30 μ crasso, loculis globulosis, ca. 200-250 μ diam., totum mesophyllum occupantibus; ascis cylindraceo-clavatis, octosporis, paraphysatis, 80-100 × 12-15, sporidiis distichis, fusoideis, utrinque attenuatis, hyalinis continuis, 20-24 × 4-4,5.

Hab. in foliis Aspidospermatis sp. (Apocynaceae), Seringal Auristella, Rio Acre, Peruvia (E. ULE).

4. Phyllachora Ajrekari H. et P. Syd., Ann. Mycol. X, 1912, p. 408; 5149 Fungi exot. exsice. 259; Theiss. et Syd., Ann. Mycol. 13., 1915, p. 548. — Stromatibus amphigenis, sparsis, irregularibus, subinde confluentibus, 1,5-5 mm. diam., opacis, atris, in epiphyllo levibus, in hypophyllo ob loculos prominulos saepe leviter rugosis; loculis numerosis (15 40) in quoque stromate, rotundatis v. irregularibus, 150-225 μ diam.; ascis cylindraceo-clavatis, 80-100 × 13-16, octosporis; sporidiis oblongo-fusoideis, utrinque obtuse attenuatis, con-

tinuis, hyalinis, intus guttulatis, 20-25 + 5-6.

Hab. in foliis petiolisque Ceropegiae? hirsutae (Ascle-piadaceae), Matheran Bombay Presid., Indiae or. (S. L. AJREKAB).

5. Phyllachora Dischidiae Syd., Enum. Philipp. Fungi I, in Philipp. 5150 Journ. of Sci. VIII (1913), p. 277. — Stromatibus in utraque foliorum pagina conspicuis, sparsis, rotundatis, 1-2 mm. diam., atris, opacis, planiusculis, sublevibus, loculos 12-25 includentibus; ascis cylindraceis, apice obtusis, brevissime stipitatis, indistincte paraphysatis, 85-105 × 9-11, octosporis; sporidis distichis, fusiformibus, continuis, hyalinis, 24-27 × 5-6.

Hab. in foliis vivis Dischidiae roseae (Asclepiadaceae), Inzon, Prov. Bataan, Mt. Mariveles, ins. Philipp. (MERRILL).

6. Phyliachora Metastelmae F. L. Stevens et N. Dalby, Bot. Gazette 5151 68., 1919, p. 57, tab. fig. 15-16. — Stromatibus nitide nigris 1-2 mm. latis, 5-15 mm. long., caulem circumdantibus et totum contextum corticis occupantibus; loculis circ. 200  $\mu$  diam. 120  $\mu$  altis; ascis octosporis; sporidiis cylindraceis hyalinis, continuis,  $14 \times 5$ .

Hab. in caulibus Metastelmae sp. (Asclepiadaceae), El Alto de la Bandera, Porto Rico.

- Phyllachora? Ostryas P. Henn. (corr. Ph. Ostreae) in Engler Bot. 5152
   Jahrb. 29., 1900, p. 151. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 570. Sec. Theiss. et Syd. l. c. minime Phyllachora sed potius Mamiania et tunc Mam. Ostryae (P. Henn.) Th. et Syd. vocanda (Betulaceae).
- 8. Phyllachora nitens Ph. Garman, Mycologia v. VII, 1915, p. 339.— 5153 Stromate maculam latam nigram nitidam efformante, quandoque aream 1 cm. et ultra latam tegente; ascis clavatis, octosporis, 100-110 v 12-16; sporidiis plerumque ovatis, uno apice acutiusculis, hyalinis et leniter granulosis, 10-12 v 6-8; paraphysibus praesentibus.

Hab. in foliis Schlegeliae brachyanthae (Bignonia-ceae), Porto Rico: Maricao, Ponce, Monte Alegrillo, Rio Grande, Prestons Ranch.

9. Phyllachora Bourreriae F. L. Stevens et N. Dalby, Bot. Gazette 68., 5154 1919, p. 54, tab. fig. 3-4. — Maculis nullis. Stromatibus circularibus et nigris, copiosis, irregulariter sparsis, 1-2 mm. diam., utrinque aeque prominentibus, in mesophyllo evolutis; clypeo in epidermide amphigeno sed leniter perithecia excedenti; loculis numerosis, globulosis, 160 μ circ. diam. parietibus definitis; ascis cylindraceis octosporis, 85 × 9-12; sporidiis hyalinis unilocularibus, 12-16 × 6-7,

Hab. in foliis Bourreriae succulentae (Borraginaceae), Vega Alto, Joyuda, Porto Rico.

10. Phyliachora caffra (Syd.) Theiss. et Syd., Ann. Mycol. 13., 1915, 5155 p. 548, Physalospora caffra H. et P. Syd., Ann. Mycol. X. 1912, p. 39. — Peritheciis maculis pallidis v. brunneolis indeterminatis saepe confluentibus insidentibus, densiuscule aggregatis, profunde immersis, utraque foliorum pagina conspicuis, globosis, atris, papillatis, 150-200 μ diam.; ascis cylindraceis, apice rotundatis, 75-90 × 9-12, filiformiter paraphysatis, octosporis; sporidiis monostichis, late ellipsoideis, continuis, hyalinis, 11-13 × 6-8.

Hab. in foliis Cordiae caffrae (Borraginaceae). Amanzimtote Natal, Africae austr. (E. M. Doidge).

11. Phyllachora Espeletiae Syd. ap. Fuhrmann et Mayor, Voy. Expl. 5156 Scient. Colombie, in Mém. Soc. neuchât. Sc. Nat. V p. 436 (1913); Theiss. et Syd., Ann. Myc. 13., 1915, p. 556. — Stromatibus epi phyllis, irregulariter sparsis, rotundatis vel irregularibus, conicoprominulis 0,5-2 mm. latis, atris, opacis, glabris, intus 1-3-locularibus; ascis cylindraceis vel clavatis, apice rotundatis, 95-120 × 16-20, octosporis; sporidiis late ellipsoideis, utrinque subinde leniter acutiusculis, saepe inaequilateris, continuis, hyalinis, 15-20 × 9-11.

Hab. in foliis Espeletiae cory m bosae (Compositae), in regione andina (dep. Cundinamarca) in Columbia, alt. 2800-3300 m.

12. Phyliachora periata Syd. ap. Fuhrmann et Mayor, Voy. Expl. Scient. 5157 Colombie, in Mém. Soc. neuchât. Sc. Nat. V p. 436 (1913). — Stromatibus hypophyllis, hemisphaerico-prominulis, in epiphyllo etiam conspicuis sed non prominentibus, sparsis, solitariis vel hinc inde paucis aggregatis et subconfluentibus, minutis, rotundatis, ½3-3/4 mm. diam., levibus, glabris, nitidulis, aterrimis, intus plerumque 1-raro 2-locularibus; ascis cylindraceis, apice obtusis, 80-120 × 11-14, octosporis; sporidiis monostichis, late ellipsoideis, continuis, utrinque late rotundatis, hyalinis, 13-16 × 8-12.

Hab. in Soliis Polymniae glabratae (Compositae), in Andis orientalibus (dép. Cundinamarca) in Columbia, alt. 2400-3200 m.

13. Phyliachora vernoniicola P. Henn. — Syll. XVII p. 836 — var. mi-5158 crospora Theiss. et Syd., Ann. Mycol. 13., 1915, p. 558; Theiss.. Decad. F. Brasil. 87 (sub Ph. vernoniicola P. H.). — Stromatibus in maculis pallescentibus indistincte rotundatis 3-5 mm. diam. insidentibus, 1/3 mm. cr., utrinque nitide nigris elevatis; ascis cy-

lindraceis pedunculatis, paraphysatis p. sp.  $55-60 \times 8.10$ ; sporidis ellipsoideis,  $9-12 \times 5, 5-6, 5$ .

Hab. in foliis Vernoniae Tweedianae (Compositae), Rio Grande do Sul, Brasilia (J. Rick).

14. Phyllachora leopoldensis Theiss. et Syd., Ann. Mycol. 13., 1915, 5159 p. 563. — Rehm, Ascom. 1791 (sub Physalosp. \*\* varians Starb.).— Stromatibus epiphyllis punctiformibus, in maculis sparsis 2.5 mm. latis griseo-ferrugineo-brunneis insidentibus; stromatibus, quandoque etiam hypophyllis, nitidulis, 150-200 μ crassis, unilocularibus, loculis globosis 180-200 μ diam.; clypeo parum evoluto; ascis cylindraceo-clavatis, paraphysatis, 65-78 × 11-16; sporidiis ellipsoideis, monostichis v. distichis, hyalinis, unilocularibus, utrinque rotundatis, 12-15 × 7-8.

Hab. in foliis ignotis (? Compositae), Sao Leopoldo, Rio Grande do Sul, Brasilia (RICK).

15. Phyliachora Connari Syd., Philipp. Journ. of Sc. IX, 1914, n. 2 p. 168; Theiss. et Syd., Ann. Mycol. 13., 1915, p. 487. — Stromatibus sparsis, innatis, in utraque foliorum pagina conspicuis, minutis, rotundatis vel angulatis, non confluentibus, 1.3 mm. longis, atris, in epiphyllo planis opacis, in hypophyllo ob loculos prominulos parum nitidulos rugulosis; loculis 10-40 in quoque stromate, globosis; ascis cylindraceo-clavatis, subsessilibus, 70-88 μ longis, 10-13 μ latis, octosporis; sporidiis oblique monostichis usque distichis, oblongis, utrinque rotundatis, saepe superne angustioribus continuis, hyalinis, 16-18 × 3,5-4.

Hab. in foliis Connari (Connaraceae), Palawan, Ins. Philipp. (MERRILL).

16. Phyllachora connarina Bacib. in Theiss et Syd., Ann. Mycol. 13., 5161 1915, p. 487. — Stromatibus rotundatis v. rotundato-polygoniis, 2-3 mm. latis nervulis limitatis, in maculis rubridis violaceo limitatis insidentibus; stromatibus depressis 8-20-locularibus, loculis rotundatis, in hypophyllo ostiolatis, 100-125 μ latis et altis; paraphysibus filiformibus, aegre conspicuis; collabescentibus; ascis elongato-cylindraceis, 86-95 × 6, octosporis; sporidiis levibus hyalinis, ellipsoideis, monostichis, 6-7 \* 3, utrinque rotundatis.

Hab. in foliis juvenilibus Connari sp. (Connaraceae), Depok prope Buitenzorg. — A Ph. Connari Syd. sporidiis praecipue diversa.

17. Phyllachora Roureae Syd., Enum. Philipp. Fungi I, in Philipp. Journ. of Sci. VIII (1912) p. 277; Syd., Fung. exot. exs. 187.— Stromatibus epiphyllis, in hypophyllo etiam visibilibus, zona ochraceo-

5162

brunnea 1 mm. circ. lata circumdatis, immersis, planis, haud prominulis, rotundatis, 1,5-2,5 mm. diam.; locuis 5-10 in quoque stromate, minutis; stylosporis filiformibus, rectis vel leniter curvatis, uno fine saepe latioribus quam altero, hyalinis, continuis, 24-46 × 1-1,5; ascis sporidiisque.... immaturis tantum visis.

Hab. in foliis vivis Roureae erectae (Connaraceae), Luzon, Prov. Bataan, Mt. Mariveles, ins. Philipp. (P. W. GRAFF).—Species rursus inquirenda, et potius ut Phyllachora delenda — Onfr. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 575.

18. Phyllachora Pycrei Syd., Ann. Mycol. 15., 1917, p. 226. — Stro- 5163 mata sparsa, elliptica vel oblonga, 1-2 mm. longa 0,5-1 mm. lata, parum nitidula, vix vel leniter convexa atra, amphigena, clypeo epidermali 20-25 μ crasso; loculi copiosi in quoque stromate, densissime stipati. globosi vel e mutua pressione angulati vel compressi, 80-160 μ diam., totam folii crassitudinem occupantes, parietibus brunneis 10 μ crassis; asci cylindracei, stipitati, paraphysati, 70-90 × 9-10; sporae fusoideae, continuae, hyalinae, utrinque acutae, 15-20 × 4-5.

Hab. in foliis Pycrei polystachyi (Cyperaceae), Manila, Ins. Philipp. (M. RAMOS). — Ph. Cyperi affinis.

19. Phyllachora schoenicola H. et P. Sydow, Ann. Mycol. XI, 1913, p. 5164 265. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 464. — Stromatibus in utraque foliorum pagina conspicuis, sparsis v. pauci-aggregatis et confluentibus, 0,5-3 mm. long., 0,5-1 mm. latis, modice prominentibus, aterrimis, superficie non rugulosis, minoribus 1-locularibus, majoribus plurilocularibus; loculis majusculis, 150-200 μ diam., ascis cylindraceis v. cylindraceo-clavatis, 75-95 ≈ 9-14, octosporis; paraphysibus numerosis, guttulatis, ascos superantibus, filiformibus, 1,25-1,5 μ crassis; sporidiis distichis, fusiformibus, utrinque attenuatis, saepe acutis, continuis, hyalinis, 20-25 ≠ 5-7, plasmate subinde bipartito, tandem spurie septatis (†).

Hab. in foliis vivis Schoeni Apogi (Cyperaceae), Mt. Banahao, ins. Philippinensium (E. B. COPELAND).

20. Phyllachora Embeliae v. Höhnel, Ann. Mycol. 18., 1920, p. 92.— 5165 Maculis foliicolis rotundatis, subconfluentibus, rubro violaceis, 1 cm. latis; peritheciis epiphyllis numerosis gregariis subconcentrice dispositis, immersis, ostiolo carbonaceo tantum prominentibus, globosis apice subconoideis 300 μ cr.; membrana peritheciorum molli pallida hine inde rubro-brunnea 4-16 μ cr., subfibrosa; ostiolo rotundato-anguloso demum 20-30 μ lato; paraphysibus numerosis, fili-

formibus, collabescentibus; ascis plerumque cylindraceis tenuiter tunicatis sessilibus  $65-80 \times 8-9$ ; sporis late ellipsoideis, hyalinis, tenuiter tunicatis intus granulosis, plerumque monostichis,  $8-10 \times 6-7$ .

Hab. in foliis vivis Embeliae pergamenae (Diapensiaceae), prope Depok, Ins. Java (M. RACIBORSKI). — Huic proxima sec. v. Höhnel *Physalospora circinnans* Pat. 1902.

21. Phyllachora secunda v. Höhnel, Ann. Mycol. 18., 1920, p. 93. — 5166 Phyll. Embeliae v. Höhn. proxima a qua differt peritheciis non concentricis; apice peritheciorum obscure rubro-brunneo nec carbonaceo, sporidiis majoribus, 12-14 × 8-9, ascis etiam majoribus 96 × 8-10.

Hab. in foliis Embeliae Ribis (Diapensiaceae), prope Depok. Ins. Java (M. RACIBORSKI).

22. Phyllachora oblongispora Syd. in Leaflets of Philipp. Bot. VI (1913) 5167 p. 1928; Theiss. et Syd., Ann. Mycol. 13., 1915, p. 533. — Stromatibus in utraque foliorum pagina conspicuis, planis, rotundatis, 1-2 mm. diam., atris, opacis, intus plurilocularibus; ascis subclavatis, 60-70 × 12-15, octosporis; sporidiis distichis, oblongis, saepe leniter curvatis, utrinque rotundatis, continuis, hyalinis, 14-17 × 4-5,5.

Hab. in foliis vivis Dipterocarpi subalpini (Dipterocarpaceae), Cabadbaran, Mindanao, ins. Philipp.

23. Phyllachora Mahae (P. Henn.) Theiss. et Syd., Ann. Mycol., 13., 5168 1915, p.546, Dothidella Mahae P. Henn., Hedw. vol. 48 (1918) p. 8.— Stromatibus amphididymis, sparsis vel aggregatis, plano-pulvinatis, rotundatis, atris, opacis, 1-2 mm. diam.; peritheciis immersis, subglobosis, obtuso-ostiolatis; ascis fusoideis vel clavatis, obtusis, octosporis, 50-75 \* 8-15, paraphysatis; sporidiis oblique monostichis vel distichis, oblongo-fusoideis vel clavatis, hyalinis, continuis, dein medio 1-septatis, 18-24 \* 5-7.

Hab. in foliis Mabae inconstantis (Ebenaceae), Morro Pellado, S. Paulo, Brasilia.

24. Phyllachora Bischofiae Syd. in Syd. et Butler, Ann. Mycol. IX, 1911, 5169 p. 396. — Stromatibus amphigenis sparsis, minutis, rotundatis v. irregularibus, 0,5-1,5 mm. longis et latis, atris, zona angusta albida vel einerea e matricis contextu formata cinctis, subinde tandem deciduis et folium perforatum relinquentibus, loculis minutis, pluribus (5-20), leniter prominulis; ascis fusoideo-clavatis, sursum attenuatis, brevissime stipitatis, 60-80 × 10-17, cop.ose paraphysatis, octosporis; sporidiis distichis, fusoideo-cylindraceis, utrinque attenuatis v. uno fine obtusis, continuis, 20-26 × 5-6,5.

Hab. in foliis Bischofiae javanicae (Euphorbiaceae), Panora Wynaad, Indiae or. (W. Mc RAE).

25. Phyllachora drypeticola F. L. Stevens et N. Dalby, Bot. Gazette 5170 68., 1919, p. 55, tab. fig. 7-8. — Maculis stromata non excedentibus; stromatibus numerosis, nigris, utrinque visibilibus, 1-2 mm. diam., clypeo stromata non excedenti; loculis rotundatis v. irregularibus, 100-200 × 125; ascis cylindraceis octosporis; sporidiis 17 × 3,5, continuis, hyalinis.

Hab. in foliis Drypetes sp., Rio Tanamà prope Arecibo, Drypetes glaucae (Euphorbiaceae), El Gigante, Utuado, Maracao, Mayaguez, Porto Rico.

26. Phyllachora Glochidii Syd., Leafit. Philipp. Bot. IV, 1911, Art. 62, 5171 p. 1157. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 525. — Stromatibus epiphyllis, sparsis, minutis, ca. 1 mm. diam., rotundatis, atris, 1-paucilocularibus; ascis cylindraceis, brevissime pedicellatis, apice rotundatis, 60-90 μ longis, 9-13 μ latis, octosporis; sporidiis oblique monostichis ellipsoideis, utrinque rotundatis, continuis, hyalinis, 14-16 μ longis, 5-7 μ latis.

Hab. in foliis Glochidii mindanaensis (Euphorbiaceae), Todaya ins. Apo, Distr. Davao, ins. Mindanao, in Philipp. (ELMER).

27. Phyllachora subbrachyspora Spegaz., Rel. Mycol. trop. etc., in Bol. 5172

Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 129. — Maculae nullae v. parvae pallescentes indeterminatae; stromata epiphylla innato-superficialia, suborbicularia 3-4 mm. diam. atra nitidula; loculi sat numerosi irregulares gyroso-daedaloidei; asci subcylindracei v. leniter obclavati, apice obtusi, postice modice attenuato-pedicellati, parce grosseque pseudo-paraphysati, octospori; sporae monostichae v. subdistichae late ellipticae utrinque obtusissime rotundatae laeves hyalinae.

Hab. ad folia viva Caseariae sp. (Flacourtiaceae), prope Apiahy, Brasilia (J. Puiggari).

28. Phyllachora brachyspora Spegaz., Rel. Mycol. trop. etc., in Bol. Ac. 5173

Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 128. — Maculae nullae
v. parvae indeterminatae epiphyllae; stromata innato-superficialia
epiphylla suborbicularia 1,5-2 mm. diam. atra nitidula, loculis sat
numerosis subglobosis parvis periphaericis; asci cylindracei breviuscule crasseque pedicellati, aparaphysati; 65-70 × 9-12; sporae
ex elliptico subglobosae, utrinque late rotundatae, laeves, hyalinae,
10 × 6-7.

Hab. ad folia viva Caseariae sp. (Flacourtiaceae), prope A-

piahy, Brasilia (J. PUIGGARI).

29. Phyliachora Xylosmatis Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5174
Buenos Aires XXIII (1912) p. 93. — Maculis nullis; stromatibus
epiphyllis, subparvis, innato-prominulis, 5-20 inordinate vel subcircinatim gregariis, colliculosis, atris, levibus, nitidulis; loculis
in quoque stromate 2-5, saepe subconfluentibus, semilenticularibus,
180-200 µ diam. albo-farctis; ascis subcylindraceis, apice obtusissimis vel subtruncatis, deorsum attenuatis et breviter pedicellatis,
90-120 × 12-20, non vel parce paraphysatis; sporidiis oblique monostichis, ellipsoideis, utrinque acutiuscule rotundatis, hyalinis,
grosse 1-guttulatis, 18-20 × 11-12.

Hab. in foliis vivis X y losmatis pubescentis (Flacour-

tiaceae), prope Calilegna, Argentina.

30. Phyllachora Costaericae Trott. n. nov., Phyllachora Pittieri Spegaz. 5175 Fungi Costaric. nonu. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 207, nec Theiss. et Syd. 1915. — Stromata epiphylla parva repandula, colliculoso-convexula, aterrima laevia nitida, loculis, paucis majusculis, 150-200 μ diam., albo-farctis; ascis linearibus mox diffluentibus, 90-120 × 11-13; sporidiis mediocribus subcylindraceis obtusis non v. vix inaequilateralibus, 15-16 × 7-9.

Hab. in foliis vivis Xylosmatis Salzmanni (Flacour-

tiaceae), prope Carthaginem, Costarica, America trop.

31. Phyllachora assimilis Theiss. et Syd., Ann. Mycol. 13., 1915, p. 439.— 5176 Stromatibus folium perforantibus, solitariis v. paucis seriatis, ex ellipsoideis linearibus, 0,5-1,25 mm. long., opace nigris, convexis; clypeo effuso, bilaterali, 20-35 μ cr., opace nigro, compacto; loculis depresse globosis, 150-220 μ cr., parietibus fibrosis, brunneis 10 μ circ. cr.; ascis paraphysatis, cylindraceis v. subglobosis, breviter pedicellatis, 75-95 × 10-13, octosporis; sporidiis recte v. oblique monostichis, ellipsoideis, late rotundatis, unilocularibus, hyalinis, 11-15 × 6-8; loculis conidiferis parvis, lenticularibus, dimidium folium occupantibus; conidiis filiformibus, unilocularibus, hyalinis, 13-17 × 1.

Hab. in foliis Andropogonis assimilis (Graminaceae), Kumaon, Himalaya (INAYAT), Dehra Dun (E. J. BUTLER), A. mieranthi Maymyo Burma, Indiae or. (BUTLER).

32. Phyllachora fragosoana Maire, Bull. Soc. N. H. dell'Afr. du Nord 5177
1917, p. 170, Phyll. Bromi var. Andropogonis Sacc., Ann. Myc. 12.,
1914, p. 285 (non Phyll. Andropogonis Karst. et Har.). — Stroma-

tibus oblongis, 1000-1200 × 160, loculis numerosis parum distinctis, 200  $\mu$  diam.; ascis 115-120 × 11,5-12, paraphysatis, octosporis; sporidis ellipsoideis utrinque rotundatis, 11-14 × 9, saepius oblique monostichis, hyalinis.

Hab. in foliis Andropogonis hirti (Graminaceae), prope Sevilla, Hispania (FRAGOSO) et pr. Alger, Afr. bor. — Socia adest Stagonospora (Placosphaerina) myriospora Pat.

33. Phyllachora andropogonicola Speg., Mycet. Argent., Anal. Mus. Nac. 5178
Buenos Aires XXIII (1912) p. 90. — Stromatibus sparsis minutis,
elongatis, 0,5-2 mm. long. 200-250 μ latis, erumpentibus, nigris,
colliculosis, subcarbonaceis, contextu parenchymatico saepius indistincto; loculis in quoque stromate 5-10 seriatis, subglobosis, 170180 μ diam., saepe confluentibus, astomis I, albo-farctis; ascis cylindraceis infra medium sensim attenuatis et breviter pedicellatis,
100-120 × 15-18, paraphysibus filiformibus parum longioribus ob.
vallatis; sporidiis plerumque oblique monostichis, ellipsoideo-rhomboideis, utrinque acutissimis, non vel vix inaequilateris, grosse
1-guttatis, hyalinis, 20 × 8.

Hab. in foliis vaginisque Andropogonis saccharati (Graminaceae), in pratis prope Bompland, Misiones, Argentina.

34. Phyllachera Anthephorae Sydow, Ann. Mycol. XIII, 1915, p. 39 et 5179 p. 439. — Stromata densiuscule sparsa, utrinque visibilia, saepe longitudinaliter seriata, elliptica, subopaca, minutissima, confluendo usque 1-1,5 mm. longa, convexula, clypeo epidermali plerumque epiphyllo 25-30 μ crasso opaco, hyphis stromaticis in mesophyllo paucis; loculis approximatis, folii altitudinem subattingentibus, applanato-globosis, 150-200 μ latis, 140-170 μ altis, membrana 10-14 μ crassa; ascis cylindraceis, copiose paraphysatis, 60-70 \* 10-14, octosporis; sporidiis oblique monostichis, ellipsoideis, continuis, hyalinis, 11-13 \* 7-9.

Hab. in foliis Anthephorae hermaphroditae (Graminaceae), Kingston, Hope Gardens, Jamaića (Eug. MAYOR).

35. Phyllachora Anthistiriae Racib in Theiss. et Syd., Ann. Mycol. 13., 5180 1915, p. 439. — Stromatibus solitariis, rotundatis, in epiphyllo nigris in hypophyllo e brunneis nigris rotundatis et 0,6-1 mm. lat. v. ovoideis et tunc usque ad 2 mm long. in maculis elongato-ovoideis brunneis rubro marginatis insidentibus; hyphis intercellularibus, in epiphyllo magis copiosis, plagas nigras efformantibus in quas 3-5 perithecia globoso-depressa insidentia; cavitate perithecii usque 200 μ lata, 100-150 μ alta; parietibus obscure brunneis v. nigris,

ostiolo punctiformi non prominenti; paraphysibus prominentibus; ascis cylindraceis, apice depresse rotundatis,  $70-80 \times 7-9$ , octosporis; sporidiis hyalinis, levibus, tenuiter tunicatis, elongato-ovoideis,  $11-12 \times 4-5$ .

Hab. in foliis Anthistiriae ciliatae (Graminaceae), Buitenzorg, Java.

36. Phyllachora striatula Theiss. et Syd., Ann. Mycol. 13., 1915, p. 5181 440. — Stromatibus in utraque pagina foliorum visibilibus, sparsis v. seriatis, linearibus 0,5-1 mm. long. 0,1-0,2 mm. latis, quandoque punctiformibus, opace nigris, prominentibus, uni v. paucilocularibus; clypeo epidermico, crasso, nigro, 20-40 μ cr., unilaterali; loculis totam crassitudinem fere occupantibus, 200-250 μ cr., parietibus lateralibus brunneis 10-15 μ cr.; ascis cylindraceo-clavatis 70-100 × 10-15, paraphysatis, octosporis; sporidiis monostichis v. subdistichis, ellipsoideis, utrinque obtusis, 1-locularibus, hyalinis intus aeque minuteque granuluso-farctis, 11-14 × 7-8.

Hab. in foliis Oxonopi semialati (Graminaceae), Carolina, Transvaal (J. BURTT DAVY).

37. Phyllachora caespiticia Theiss. et Syd., Ann. Mycol. 13., 1915, p. 5182 441, Phyll. bonariensis Speg. var. tonkinensis Roum., Rev. Mycol. 1891 p. 77 (nom. nud.), Fungi sel. exs. n. 5643, non Phyll. tonkinensis Sacc. — Stromatibus epiphyllis, plerumque arcte gregariis, ellipsoideis ½ -½ mm- long. ¼ mm. latis, rotundato-prominentibus, nitidulis, in hypophyllo punctiformibus macula pallide flava circumdatis, unilocularibus; loculis depresse globoso-ellipsoideis 300-380 μ long. 200-250 μ latis 140-160 μ altis, supra et infra clypeo epidermico tectis (clypeo hypophyllo breviore et tenuiore) lateraliter parietibus stromaticis destitutis; ascis paraphysatis, clavatis, breviter pedicellatis, 60-70 × 11-14, octosporis; sporidiis monostichis v. distichis, elongato-ellipsoideis, hyalinis, unilocularibus, utrinque angustatis sed non acutatis, 12-15 × 5-6.

Hab. in foliis Bambusae (Graminaceae), Tonkin, Cina (BA-LANSA).

38. Phyllachora orbicula Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2221. — Stromatibus maculis dilute flavidulis utrinque foliorum paginae innatis, in epiphyllo evolutis, sparsis, atris, orbicularibus, 0,5-0,8 mm. latis, glabris, vix conspicue papillulatis, loculis 1-3 globosis innatis; ascis clavatis, sessilibus, filiformi-paraphysatis, 60 × 10; sporidiis distichis, oblongis, utrinque rotundatis, non guttatis, 10-12 × 5-5,5.

Hab. in foliis Bambusae Blumeanae, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. Reyes). — Ph. graminis (Pers.) Fuck. stromatibus majoribus, ascis cylindraceis diversa. — Sec. Theiss. et Sydow, Ann. Myc. 13., 1915, p. 441: ascis 55-70 × 10-13, sporidiis ellipsoideis v. elongato-ellipsoideis, 12-16 × 5,5-6,5.

39. Phyliachera Bambusae (Syd. et Butl.) Syd. et Butl. in Th. et Syd., 5184 Ann. Mycol. 13., 1915, p. 441, Metachora Bambusae Syd. et Butl., l. c. p. 400. — Stromatibus in maculis fuscis oblongis v. linearibus indeterminatis insidentibus, ex utraque foliorum pagina plus minus globose v. semiglobose erumpentibus, \(^1/\_2\)-\(^1/\_2\) mm. diam., atris, carbonaceis, phyllachoroideis, intus unilocularibus, contextu minute parenchymatico; ascis cylindraceis 100-150 × 10-16, pedicellatis, octosporis, filiformiter paraphysatis; sporidiis di-tristichis, oblongocylindraceis, continuis, hyalinis, 18-32 × 4-5.

Hab. in foliis vivis v. languidis Bambusae, Kanouth Malabar, Indiae or. (E. J. BUTLER).

40. Phyllachora malabarensis Syd. et Butl., Ann. Mycol. IX, 1911, p. 5185 398; Theiss. et Syd. 13., 1915, p. 443. — Maculis nullis v. indeterminatis, flavidis; stromatibus epiphyllis, rarius etiam hypophyllis, innatis, plano-convexis, solitaris, oblongis, ellipticis v. sublinearibus, 0,5-1,5 mm. long. 0,5-1 mm. latis, atris, glabris, opacis, per aetatem subrimose dehiscentibus, contextu indistincto; loculis 4-8 in quoque stromate majusculis; ascis clavatis, apice obtusis, breviter pedicellatis, 70-100 × 17-26, octosporis; sporidiis oblongis v. fusoideis, continuis, hyalinis, intus minute granulatis, utrinque obtusis, 27-35 × 9-14, distichis. Stromatibus spermogonicis plerumque minoribus; sporulis filiformibus, valde curvatis, plerumque falcatis, hyalinis, non septatis, nec guttulatis, 25-35 × 1,5-2.

Hab. in foliis Bambusae sp., Wynaad, Malabar, Indiae or. (E. J. BUTLER). — Ph. Tjangkorreh Rac. et Ph. eximiae Syd. affinis differt vero ascis minoribus sed sporis majoribus.

41. Phyllachora sinensis Sacc., Philipp. Journ. of Sc. Manila, P. I., 5186
1921, p. 600. — Stromatibus minutis, subcircularibus, amphigenis
in maculis flavidis innatis, paucilocularibus, loculis epiphyllis non
v. vix emergentibus; ascis cylindricis, praelongis, 190 \* 9-11; sporidiis monostichis, fusoideis, utrinque obtusatis, 28 \* 9; hyalinis,
farctis.

Hab. in foliis vivis Bambusae sp., Fukien, Foochow, Cina (SKVOETZOW). — Phyll. eximiae Syd. (in Arundinaria) affinis, differt imprimis ascis multo angustioribus.

42. Phyliachora megastroma Pat., Bull. Soc. Mycol. 1914, p. 345. — 5187 Stromatibus amphigenis, macula arida flava insidentibus, carbonaceo-coriaceis, atris, elongatis (1-15 mm. longis, 1-2 mm. latis), sulcis pluribus, linearibus notatis; peritheciis paucis (2-6) albofarctis, poro pertusis; ascis cylindraceis 90-140 × 8-10, octosporis; paraphysibus numerosis, hyalinis, ramosis; sporidiis uniseriatis, ellipticis, hyalinis, 15-18 × 6, crasse tunicatis, contentu viridulo, granuloso, vel 2-guttulatis.

Hab. parasitica in foliis Bambusaceae cujusdam, M' Brès, Congo, Africae (BAUDON).

43. Phyllachora graminis (Pers.) Fuck. — Syll. II p. 602 fm. Bambusae 5188 Har. et Pat. in Bull. Mus. Hist. Nat. Paris 1911, p. 368. — Ascis 100 × 60; sporidiis 12-14 × 6.

Hab. in foliis B a m b u s a c e a e , Chari: Gribingui, Congo gallico. — Var. Beckerae polystachiae Bacc., F Etiop. II n. 84, in Pirotta, Ann. Bot. 1917. — Stromatibus ellipticis ad 0,5 mm. longis, amphigenis, solitariis rarius gregariis ac confluentibus, monolocularibus, vel paucilocularibus, loculis 315  $\mu$  latis 180-200  $\mu$  altis; totius folii latitudinem occupantibus ob ostiolo prominulo papillatis; ascis paraphysatis (80-96 × 8-9,5); paraphysibus fere duplo longioribus, guttulatis obvallatis; sporidiis ellipticis oblique monostichis (9-11 × 6-7).

Hab. in Beckera polystachia Fr. (Graminaceae), Gondar, Etiopia, Africa

44. Phyliachora Biepharoneuri Ch. E. Fairman, Mycologia 10., 1918, p. 5189 251. — Stromatibus foliicolis utrinque visibilibus elongatis curvulis 1-3 mm. long. 1 mm. latis nervos elevantibus; loculis 2-10 v. ultra in quoque stromate, epistromate persistenti intus limitatis; ascis et paraphysibus illis Ph. graminis conformibus; sporidiis monostichis, ellipsoideis eguttulatis, hyalinis, 10 ≈ 6.7.

Hab. in foliis Blepharoneuri tricholepidis (Graminaceae), Ute Park Colfax C., 2200-2900 m. alt., New Mexico, Amer. bor. (P. C. STANDLEY).

45. Phyllachora Centothecae Sydow, Ann. Mycol. XIII, 1915, 4p. 39; 5190 Theiss. et Syd., l. c. 13., 1915, p. 446. — Stromatibus amphigenis, plerumque in greges plus minus elongatos (3-15 mm. longos) seriatim dispositis, exiguis, rotundatis usque ellipticis, punctiformibus, <sup>1</sup>/<sub>s</sub>. <sup>1</sup>/<sub>s</sub> mm. longis, nitidulis, convexis, 1-loculigeris; loculis globulosis vel applanato-globosis, 130-200 μ diam., clypeo bilaterali 25-45 μ crasso opaco aterrimo; ascis cylindraceis, breviter stipi-

tatis, copiose paraphysatis, octosporis,  $50-60 \approx 9-11$ ; sporis ovatis, continuis, hyalinis, oblique monostichis usque distichis, utrinque rotundatis,  $11-13 \approx 5-7$ .

Hab. in foliis Centothecae lappaceae (Graminaceae), Moulmein, Burma, Indiae (E. J. BUTLER).

46. Phyllachora Dimeriae Theiss. et Syd., Ann. Mycol. 13., 1915, p. 447.— 5191 Stromatibus amphigenis, sparsis, oblongis v. breviter striaeformibus 0,5-1,5 mm. long. 0,5 mm. latis, nitide nigris, prominulis non confluentibus; clypeo uno latere v. utrinque evoluto, epidermoideo, opaco, 20-30 μ cr.; loculis plerumque parvis, 140-190 μ diam., rotundatis; ascis cylindraceis copiose paraphysatis, octosporis, 50-60 × 11-14; sporidiis plerumque monostichis, ovoideis v. oblongo-ellipsoideis, utrinque rotundatis, unilocularibus, hyalinis, 10 14 × 7-8.

Hab. in foliis Dimeriae stipaeformis (Graminaceae), Mt. Konomine prov. Tosa, Japonia (T. Joshinaga)

47. Phyllachora atronitens Rehm, Ascomyc. Philipp. V, Leaflets of Phi-5192 lipp. Botany VI (1914) p. 2221. — Stromatibus gregariis, innatis, discoideis vel oblongatis, corticem atronitentem elevantibus et longitudinaliter disrumpentibus, 1-3 mm. longis et latis, nigris, ostiolis minimis conspicuis; ascis fusiformibus, octosporis, aparaphysatis, 45-48 \* 9; sporidiis distichis, fusiformibus, rectis, continuis, guttatis. hyalinis, 12 \* 3-3,5.

Hab. in Donace cannaefolio emortuo (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO). — Sec. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 564, probabiliter eadem est ac *Phyll. atrofigurans* Rehm (cnfr. n. 48), et e Phyllachoraceis removenda. Ad Clypeosphaeriaceas?

48. Phyllachora atrofigurans Behm. Ascom. Philipp. I, in Philipp. Journ. 5193 of Sci. VIII (1813) p. 183. — Stromatibus epidermidi innatis, nigris, planis, 0,3-1 mm. diam. orbicularibus, solitariis, dein in maculis ellipticis vel orbicularibus, figuratis, usque ad 1 cm. diam., longitudinaliter vel quadratim confluentibus; peritheciis innatis, globulosis. stroma minutissime papillulatum conoideo-subelvantibus, 120 μ diam.; ascis fusiformibus, sessilibus, 35 × 10, octosporis; sporidiis 2 3-stichis, oblongis vel clavatis, 1-cellularibus, hyalinis, 8-9 × 2,5-3.

Hab. in culmis Donacis cannae for mis (Graminaceae), atro-marmoratis, Luzon, prov. Laguna. Los Baños, ins. Philipp. (C. F. BAKER). — Cnfr. Ph. atronitens, n. 47.

49. Phyllachora donacina Rehm, Ascomyc. Philipp. V, Leaflets of Phi-5194

lipp. Botany, VI (1914) p. 2222. — Stromatibus laxe gregariis, innatis, ellipsoideis vel orbicularibus, convexulis, atris, plerumque parallele seriatis, 1-3 mm longis, 1 mm latis, intus nigris, denique longitudinaliter apertis; loculis circ. 8, monostichis, arcte confertis, globulosis, 120  $\mu$  circ. latis; ascis clavatis, aparaphysatis, 40-50  $\times$  6; sporidiis distichis, fusoideis, rectis, utrinque acutatis, continuis, hyalinis, 15-18  $\times$  2,5-3.

Hab. in culmo Donacis cannaeformis (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES). — Species ulterius inquirenda, sec. Th. et Syd., Ann. Mycol. 13., 1915, p. 448.

50. Phyllachora Eriochicae Speg., Syll. XXII. p. 423 — var. columbiensis 5195 Theiss. et Syd., Ann. Mycol. 13., 1915, p. 448. — Stromatibus elongato-ellipsoideis, usque 0,8 × 0,28-0,32 mm., plerumque parvis et seriatim confluentibus, utrinque visibilibus; clypéo in utrinque epidermide; loculis e globosis depressis, 240-280 μ latis 100-140 μ altis, parietibus tenuibus praeditis; ascis cylindraceis, paraphysatis, p. sp. 70-80 × 9; sporidiis plerumque monostichis, elongato-angustatis, 13-14 × 4-5, v. quandoque 11 × 5,5.

Hab. in foliis Eriochloae punctatae (Graminaceae), Medellin Columbia, Amer. austr. (E. MAYOE).

51. Phyllachera imperatae Syd., Ann. Mycol. 15., 1917, p. 226. — Stro-5196 mata in utraque foliorum pagina visibilia, sparsa vel gregaria, minuta, oblonga, 1-2 mm. longa; loculi 5-10 in quoque stromate, applanati, 300-350 μ lati, 80-100 μ alti, clypeo amphigeno 20-30 μ crasso; asci cylindracei, 70-80 \* 12-14, octospori, paraphysati; aporae oblique monostichae vel distichae, anguste ellipsoideae vel oblongo-ellipsoideae, continuae, hyalinae, 12-17 \* 5-6.

Hab. in foliis Imperatae cylindricae (Graminaceae), Benguet, Luzon, Ins. Philipp. (E. D. MERRILL) et Imperatae spec., Los Baños (C. F. BAKER).

52. Phyllachora exigua Theiss. et Syd., Ann. Mycol. 13., 1915, p.449.— 5197 Stromatibus amphigenis, sparsis, minutis, punctiformibus 200-350 μ diam., rotundatis, parum nitidis prominentibusque, 1-v. 2-3-locularibus; elypeo epidermoideo in utraque parte evoluto, 18-24 μ cr, opaco; loculis rotundatis, 140-170 μ diam. parietibus brunneis 10-14 μ cr. praeditis; ascis cylindraceis, copiose paraphysatis, octosporis. pedicellatis, p. sp. 45-58 × 10-12; sporidiis monostichis, ovoideis v. ellipsoideis, utrinque obtusis, unilocularibus, hyalinis, 8-11 × 6-8.

Hab. in foliis Isachnes australis (Graminaceae), Akatsuchi-toge prov. Tosa, Japonia (T. Joshinaga).

53. Phyllachora Tehonis Trott., nom. n.— Syn. Phyllachora Ischaemi L.R. 5198 Tehon, Bot. Gazette 67., 1919, p. 507, tab. XVIII fig. 2-3, nec Syd.— Stromatibus epiphyllis rotundatis confertis saepe confluentibus mesophyllo innatis, 0,75-1,25 mm. diam.; clypeo 24-26 μ cr.; loculis duobus v. plurimis in quoque stromate, e sphaeroideis ampullaceis, 125-145 μ diam.; ascis e cylindraceis clavatis 105-150 \* 10-12, octosporis; sporidiis hyalinis sphaeroideis monostichis 8 μ diam., uniguttulatis; paraphysibus filiformibus.

Hab. in foliis Ischaemi latifolii (Graminaceae), St. Pierre Martinica, Porto Rico.

54. Phyllachora Ischaemi Sydow, Ann. Mycol. 13., 1915, p. 40 et p. 5199 449. — Stromatibus amphigenis, sparsis vel saepissime seriatim dispositis, minutis, punctiformibus, ellipticis, ½ ½ mm. longis, confluendo 1 mm. longis, convexis, nitidulis, 1-loculigeris, confluendo pauciloculigeris; loculis folium subpenetrantibus, applanato-globosis, 180-220 μ diam., clypeo bilaterali vel unilaterali, opaco, 20-30 μ crasso; ascis cylindraceo-clavatis, copiose paraphysatis, breviter stipitatis, octosporis, 45-60 × 12-18; sporidiis irregulariter distichis vel etiam conglobatis, ovato-ellipsoideis, utrinque obtusis, continuis, hyalinis, 12-15 × 5-6,5.

Hab. in foliis Ischaemi laxi (Graminaceae), Bilin, Burma, Indiae (E. J. BUTLER).

55. Phyllachora Miscanthi Syd., Ann. Mycol. 15., 1917, p. 227. — Stro-5200 mata in utraque foliorum pagina visibilia, sparsa, elliptica, 1,5-3 mm. longa, nitidula plurilocularia, clypeo amphigeno, firmo, aterrimo, 30-35 μ crasso, ex byphis brunneolis 3-3,5 μ latis contexta; loculi 170-300 μ lati; asci cylindraceo-clavati, stipitati, paraphysati, 160 180 × 18-22, octospori; sporae monostichae, late ellipsoideae, continuae, rotundatae, hyalinae, 18-24 × 12-14.

Hab. in foliis Miscanthi sinensis (Graminaceae), Benguet, Luzon, Ins. Philipp. (E. D. MERRILL).

56. Phyllachora vulgata Theiss. et Syd., Ann. Mycol. 13., Barthol. Fungi 5201 Columb. n. 2249, 1915 p. 450. — Stromatibus totam crassitudinem folii occupantibus, elongatis, 1-2 mm. long. 0,5-1 mm. latis, crebre sparsis v. seriatis, non vel vix confluentibus, prominentibus, opace nigris, loculis 1-3 seriatis praeditis; clypeo utrinque fortiter evoluto, 20-40 μ cr., compacto, nigro; loculis confertis, totam crassitudinem stromatis occupantibus prominentibusque, globosis, 160-

220  $\mu$  latis 150-190  $\mu$  altis, parietibus lateralibus bene evolutis, 10-12  $\mu$  cr., brunneis; ascis cylindraceis, breviter pedicellatis, copiose paraphysatis, 60-75  $\times$  8-10, octosporis; sporidis monostichis, ellipsoideis, hyalinis, unilocularibus, 9-11  $\times$  4,5-5,5.

Hab. in foliis Muehlenbergiae silvaticae, racemosae, diffusae, foliosae, soboliferae (Graminaceae), in America bor frequens. — Ph. graminis proxima sed stromatibus minutis praecipue diversa.

57. Phyllachora Ophiuri Syd., Ann. Mycol., 15., 1917, p. 227.—Stro-5202 mata amphigena, plerumque hypophylla seriatim disposita, elliptica vel oblonga 0,5-1 mm. longa, confluendo 2 mm. longa, convexa, nitidula, plurilocularia, elypeo epidermali firmo, aterrimo, opaco, 25-30 μ crasso; loculi 250-500 μ lati, 150-300 μ alti, parietibus lateralibus brunneolis 10-12 μ crassis.ex hyphis tenuissimis compositis; hyphae mycelii totam folii crassitudinem occupantes, flavidobrunneolae, 2,5-3,5 μ cr.; asci clavati copiose paraphysati, 80-90 × 15-18, octospori; sporae oblique monostichae usque subdistichae, ovatae vel ellipsoideae, utrinque rotundatae, continuae, hyalinae, 12-13 × 9-10.

Hab. in foliis Ophiuri corymbosi (Graminaceae), prov. Rizal, Ins. Philipp. (M. RAMOS).

58. Phyliachora Oryzopsidis Theiss. et Syd., Ann. Mycol. 13., 1915, 5203 p. 451 Barthol, Fungi Columb. 3536; Rehm, Ascom. 1916 (sub Ph. graminis). — Stromatibus epiphyllis, in hypophyllo non v. vix visibilibus, sparsis v. laxe seriatis, ex ellipsoideis breviter linearibus, <sup>1</sup>/<sub>s</sub>·1 mm. long. <sup>1</sup>/<sub>s</sub> mm. latis, parum prominentibus, nigris, subopacis, non confluentibus; clypeo epidermoideo, 20-25 μ cr., nigrobrunneo, parum incrassato, limitato, clypeo basilari non v. vix evoluto; loculis 1-2 seriatis e depresse globosis lenticularibus 150-230 μ latis 90-140 μ altis, parietibus lateralibus tenuibus, brunneolis, 8-10 μ cr.; ascis cylindraceis, 70-95 × 9-10, paraphysatis, breviter pedicellatis, octosporis; sporidiis monostichis, ex ellipsoideis oblongis, utrinque obtusis rotundatis, unilocularibus, hyalinis, 11-14 × 5-6,5.

Hab. in foliis Oryzopsidis asperifoliae (Graminaceae), London Ontario, Canada, Amer. bor. (DEARNESS).—A Ph. graminis fabrica stromatis loculorum diversa.

59. Phyllachora congruens Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2220. — Stromatibus foliis late flavidule decoloratis innatis, sparsis, in utraque folii pagina conspicuis, atris, irregulariter discoideis, interdum striatulis 100-200 μ diam., loculos

1-3 vix ostiolatos includentibus; ascis clavatis, rarissime cylindraceis,  $40-50 \times 10\cdot 12$ , paraphysibus filiformibus obvallatis; sporidiis distichis, subclavatis, utrinque rotundatis, continuis, hyalinis, eguttulatis,  $12 \times 4-5$ .

Hab, in foliis Panici carinati (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M.B.RAIMUNDO). — Sec. Theiss. et Sydow, Ann. Myc. 13., 1915, p. 451; ascis 45-65 × 10-14, paraphysibus apice saepe clavulatis, sporidiis distichis, 11-13 × 4-5.

60. Phyllachora Raciborskii Theiss. et Syd., Ann. Mycol. 13., 1915, 5205 p. 453. — Stromatibus amphigenis, plus minus aequaliter sparsis v. hinc inde paucis approximatis v. etiam cencentrice dispositis, parvis, ovoideis, 0,2-0,4 mm. long. non v. raro confluentibus, prominulis, uni-v. 2-3 locularibus; clypeo in utroque latere parum evoluto, 20 μ circ. crasso; loculis depressis, 60-120 μ altis et usque ad 220 μ latis totam crassitudinem foliorum occupantibus; ascis cylindraceis, octosporis, copiose paraphysatis, 65-80 × 13-15; sporidiis plerumque distichis, ellipsoideo-fusoideis, utrinque angustatis sed obtuse rotundatis, unilocularibus, hyalinis, 14-18 × 6-7,5.

Hab. in foliis Panici nepalensis (Graminaceae), Salak, Java.

61. Phyllachora Vanderystii Theiss. et Syd., Ann. Mycol. 13., 1915, 5206 p. 455.—Stromatibus densiuscule sparsis, utrinque visibilibus, saepius longitudinaliter seriatis, ellipticis, nigris, subnitentibus, usque 1 mm. longis, convexulis; clypeo epidermali in utraque folii pagina 25-30 μ cr., opacis, hyphis stromaticis in mesophyllo parcis; loculis approximatis, altitudine folii, applanato-ellipsoideis, 500 μ long. 250-300 μ latis 160-200 μ altis, membrana brunnea (hyphis e stromate clypeali oriundis concentrice circumpositis) 8-10 μ crassis; ascis cylindraceis, paraphysatis, breviter pedicellatis, 65-75 × 12-16; sporidiis 1-2-stichis, ellipsoideis v. oblongis, hyalinis, continuis, 13-15 × 5,5-6,5.

Hab. in foliis Panici plicati (Graminaceae), Nyango-Tal. Congo, Africa (H. VANDERYST).

62. Phyllachora sanguinolenta Theiss. et Syd., Ann. Mycol. 13., 1915, 5207 p. 455. — Stromatibus amphigenis arcte gregariis, rotundatis v. ellipsoideis, 1/3-3/4 mm. prominenter convexis, nitidulis, raro confluentibus, in maculis indistinctis insidentibus; elypeo epidermali 20 μ cr., amphigeno v. unilaterali; loculis ellipsoideis v. rotundatis et 240 μ diam., parietibus tenuibus brunneis; ascis cylindraceis, paraphysatis, breviter pedicellatis, 60-70 × 10-14, sporidiis monosti-

chis, quandoque distichis, ellipsoideis, rotundatis, hyalinis, unilocularibus, 13,5 × 7-8.

Hab. in foliis Panici sanguinolenti (Graminaceae), Nyangotal, Congo (H. VANDERYST). — Var. microspora Theiss. et Syd. l. c., stromatibus sparsis convexis, nitidulis, ellipsoideis, rotundatis, 0,5-1 mm. long., sporidiis ellipsoideis, 8 \* 5.—Hab. in Graminacea ignota, Nyango, Congo (H. VANDERYST).

63. Phyllachora Panici-sulcati (P. Henn.) Theiss. et Syd., Ann. Mycol. 5208 13., 1915 p. 453, Phyll. graminis (Pers.) Fuck. var. Panici-sulcati P. Henn., Hedwigia 41., 1902, p. (103). — Phyll. seriatae proxima, a qua differt stromatibus parum mājoribus oblongis v. ellipsoideia 1-1,5 mm. longis; sporidiis plerumque latioribus obtusis, 10-15 \* 7-9.

Hab. in foliis Panici sulcati (Graminaceae), Costa Rica.

64. Phyllachora seriata Theiss. et Syd., Ann. Mycol. 13., 1915, p. 453. — 5209 Stromatibus secus nervos in maculis flavescentibus plus minus distincte seriatis, in utraque pagina foliorum visibilibus, parvis, non vel vix confluentibus, ellipsoideis v. oblongis, usque ½ mm. long., nitide nigris, plerumque unilocularibus; clypeo in utroque latere evoluto, loculos parum crassiore, 15-20 μ cr.; loculis 150-180 μ altis 200-280 μ latis, totum folium amplectentibus; ascis copiose paraphysatis, cylindraceo-clavatis, pedicellatis, 60-80 × 10-14, octosporis; sporidiis monostichis v. distichis, ellipsoideo-fusoideis, utrinque angustatis, apice obtusis, unilocularibus, hyalinis, 13-15 × 5,5 6,5.

Hab. in foliis Panici sp. (Graminaceae), Dumaguete prov. Negros, Ins. Philippin. (ELMER).

65. Phyllachora quadrospora L. R. Tehon, Bot. Gazette 67., 1919, p. 5210 507, tab. XVIII fig 4. — Stromate variabili plerumque e ovoideo lineari, 0,5-1 × 0,5 mm., elypeo epidermali amphigeno plerumque biloculari; loculis subsphaeroideis, 115-125 μ diam.; ascis cylindraceis breviter stipitatis, 100-110 × 10-12, 4-sporis, paraphysatis; sporidiis hyalinis, granulosis, 2-guttulatis, ellipsoideis, 20-22 × 8.

Hab. in foliis Paspali glabri (Graminaceae), Maricao, P. conjugati, Tanama River, Porto Rico.

66. Phyllachora Winkleri P. et H. Syd., Ann. Mycol. X, 1912, p. 80.— 5211 Theiss. et Syd., Ann. Myc. 13., 1915, p. 456. — Stromatibus innatis, utrinque prominulis, epidermide nigrefacta adnata tectis, aterrimis, ellipticis usque oblongis, saepe confluentibus, 1-3 mm. diam., ob loculos numerosos plus minusve prominulos rugulosis; ascis cylindraceis, octosporis, breviter pedicellatis, 80-120 ≈ 11-16; sporidiis monostichis, globosis, subglobosis v. late ellipsoideis, continuis,

hyalinis,  $11-17 \approx 9-13$ ; paraphysibus numerosis, filiformibus, ascos superantibus; loculis junioribus, spermatiis filiformibus, varie curvis,  $15-20 \approx 1$ , hyalinis instructis.

Hab. in foliis Paspali serobiculati (Graminaceae), Muanza Lac, Victoria, Africa or. (B. Schröder et H. Winkler).— A Ph. graminis sporis majoribus plerumque globosis diversa.

67. Phyllachora paspalicola P. Henn., Hedw. vol. 48 (1908) p. 106.— 5212 Rehm, Ascom. 1785; Theiss. et Syd., Ann. Myc. 13., 1915, p. 456.— Maculis effusis, fuscidulis; stromatibus amphididymis, sparsis, rotundato-pulvinatis, minutis, atris, ca. 300 μ diam.; peritheciis immersis, globulosis; ascis cylindraceo-subclavatis, obtusis, octosporis, paraphysatis, 70-90 × 8-10; sporidiis monostichis, ellipsoideis, utrinque rotundatis, byalinis, 6-8 × 4,5-6.

Hab. in foliis Paspali sp. (Graminaceae), hort. botan. Goeldi, Parà, Brasilia (BAKER). — A Ph. graminis Fuck. etc. diversa.

68. Phyllachora Penniseti Sydow, Ann. Mycol. XIII, 1915, p. 39. — 5213 Theiss. et Syd, Ann. Myc. 13., 1915, p. 457. — Stromatibus in utraque foliorum pagina conspicuis, sparsis vel aggregatis et seriatim dispositis, rotundatis vel oblongis, 0,5-1 mm. longis, subinde confluendo majoribus, opace atris, intus plurilocularibus, loculis irregularibus majusculis, 280-350 μ longis, 200-300 μ altis, clypeo bilaterali 15-25 μ crasso, parietibus lateralibus 8-10 μ latis brunneolis; stylosporis rectis vel flexuosis, continuis, filiformibus, hyalinis, 18-35 × 1; ascis clavatis, ad apicem rotundatis, 70-95 × 20-26, paraphysatis, 8-sporis; sporidis distichis, late ellipsoideis, utrinque late rotundatis, continuis, hyalinis, intus guttulatis, 17-24 × 11-18.

Hab. in foliis Penniseti Benthami Steud. (Graminaceae), Lazaret St. Jean, Congo belgica (H. VANDERYST).

69. Phyllachora Bromi Fuck. — Syll. II, 608 — fm. Poae-nemoralis Gz. 5214 Frag. in Trabajos Mus. Nac. Ciencias Nat., ser. Botan., n. 7 (1914) p. 32. — Stromatibus oblongis vel irregularibus 1-2 ≈ 0,5-1 mm.; loculis paucis; ascis 90-100 ≈ 11-12, paraphysatis, octosporis; sporidiis ellipsoideis, oblique vel irregulariter monostichis, hyalinis, 10-12 ≈ 5,5-5, guttulis 2-3 praeditis.

Hab. in foliis Poae nemoralis var. vulgaris (Graminaceae), prope Cercedilla in montibus Guadarramae, Hispania.
70. Phyllachora Pogonatheri Sydow., Ann. Mycol. XIII, 1915, p. 40.— 5215
Theiss. et Syd., Ann. Myc. 13., 1915, p. 458. — Stromatibus amphigenis, solitariis, haud seriatis, minutis, rotundatis, punctiformibus, 0,25-0,5 mm. diam., vix nitentibus, 1-3 loculigeris, planiuscu-

lis; loculis matricem fere penetrantibus, applanatis, 200-300 µ longis 170-220 µ altis, clypeo bilaterali, opaco, atro, 20-35 µ crasso, membrana laterali multo tenuiore ca. 10 µ crassa brunneola; ascis cylindraceis, breviter stipitatis, octosporis, paraphysatis, 60-80 × 10-14; speris plerumque 1-stichis vel oblique 1-stichis, subinde distichis, ellipsoideis, utrinque obtusis, continuis, byalinis, 12 × 5-6.

Hab. in foliis Pogonatheri saccharoidei (Gramina-ceae), Kumaon Himalaya, Indiae (INAYAT com. E. J. BUTLER).

71. Phyllachora leptotheca Theiss. et Syd., Ann. Mycol. 13., 1915, p. 5216 458. — Stromatibus amphigenis folium decoloratum perforantibus, plerumque aeque distributis, parvis, rotundatis,  $\frac{1}{3}$ - $\frac{3}{4}$  mm. diam., utrinque prominulis, nitidulis, pancilocularibus; clypeo in utraque folii pagina, epidermali, opaco, 20-30  $\mu$  cr.; loculis rotundatis, 130-150  $\mu$  diam., parietibus brunneis. 10-12  $\mu$  cr.; ascis cylindraceis, pedicellatis, copiose paraphysatis, 55- $70 \times 4$ ,5-6, octosporis; sporidiis monostichis, ellipsoideis, plerumque utrinque acutiusculis, unilocularibus, hyalinis, 8-10  $\times$  4-4.5.

Hab. in foliis Polliniae imberbis (Graminaceae), Tochimura, Tosa, Japonia (T. Joshinaga).

72. Phyllachora Polypogonis Theiss. et Syd., Ann. Mycol. 13., 1915, 5217 p. 458. — Stromatibus amphigenis, oblongis v. breviter linearibus, <sup>1</sup>/<sub>3</sub>.1 mm. long. confluendo usque 2 mm. long., parvis <sup>1</sup>/<sub>a</sub>.1 mm. latis, opacis, sparsis v. ordinate distributis, paucilocularibus; clypeo amphigeno epidermoidali, opaco, 20-30 μ cr; loculis depresse rotundatis, totam crassitudinem folii occupantibus, 170-250 μ latis, 140-180 μ altis parietibus brunneis 10 μ cr.; ascis cylindraceis, breviter pedicellatis, copiose paraphysatis, octosporis, 55-70 × 9-12; sporidiis monostichis, ovoídeis, rotundatis, unilocularibus, hyalinis, 9-11 × 6,5-8.

Hab. in foliis Polypogonis criniti (Graminaceae), Concepcion, Chile (F. W. NEGER).

73. Phyllachora Rotthoelliae Syd. et Butl., Ann. Mycol. IX, 1911, p. 5218 400. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 458. — Stromatibus innatis, amphigenis, oblongis v. linearibus, saepe confluentibus, usque <sup>1</sup>/<sub>2</sub> 1 cm. longis, atris; loculis pluribus, prominulis, majusculis; ascis cylindraceis, copiose paraphysatis, 65-80 × 10-14, octosporis; sporidiis ellipsoideis, recte v oblique monostichis, utrinque rotundatis, hyalinis, continuis, plasmate saepe bipartito, 11-17 × 6,5-8.

Hab. in foliis Rottboelliae exaltatae (Graminaceae),

The Droog Nilgiri Hills, Indiae or. (E. J. BUTLER), et Luzon. Ins. Philipp. - A Ph. graminis differt praecipue stromatibus sporidiisque majoribus.

74. Phyliachora Sacchari-spontanei Syd., Enum. Philipp. Fungi I, in 5219 Philipp. Journ. of Sci. VIII (1913) p. 279. - Theiss. et Syd., Ann. Mycol. 13., 1915, p. 459. - Stromatibus amphigenis, in utraque foliorum pagina conspicuis, maculis flavido-pallescentibus saepe rutovel sanguineo marginatis insidentibus, saepe etiam sine maculis, sparsis vel paucis laxe seriatim dispositis, oblongis, 0,5-1,75 mm. longis, 330-750 µ latis, carbonaceis, subopacis; loculis seriatim dispositis, minutis; ascis clavatis, subsessilibus vel breviter stipitatis, 75-100 \* 18-22, filiformi-paraphysatis; sporidiis distichis, fusiformibus, utrinque leniter attenuatis, continuis, hyalinis, intus minute guttulatis, 22-27 \* 7,5-8,5; stylosporis simul praesentibus, breviter filiformibus, rectis vel leniter curvulis, hyalinis, 16-22 × 0,75-1.

Hab. in foliis Sacchari spontanei (Graminaceae), Luzon, prope Manila, ins. Philipp. - Cum Ph. Sacchari P. Henn, in Saccharo officinarum saepe confusa, sed ab ea sporidis alienis semper dignoscenda.

75. Phyllachora Evansii P. et H. Syd., Ann. Mycol. X, 1912, p. 40. 5220 Theiss, et Syd., Ann. Mycol. 13., 1915, p. 459. - Stromatibus amphigenis, sparsis v. seriatim dispositis, oblongis, 0,5.1 mm. long., 1/2-1/2 mm. latis, atris glabris, haud nitentibus, intus paucilocularibus, loculis irregularibus; ascis cylindraceis v. cylindraceo clavatis, apice rotundatis, octosporis, 70-120 × 7-12; paraphysibus filiformibus, numerosissimis; sporidiis monostichis usque subdistichis, ellipsoideis usque oblongis, plerumque utrinque rotundatis, subinde etiam basi leniter productis, rectis, hyalinis, 14-18 \* 6 8, contentu spurie granulato-striato; pycnidiosporis simul praesentibus varie curvis saepe falcatis, hyalinis, 15-25 > 1.

Hab. in foliis Setariae sulcatae (Graminaceae), Barberton, Transvaal (J. BURTT DAVY). Phyll. setariaecola Speg. videtur diversa.

76. Phyllachora Engelhardtiae Rac. in Theiss. et Syd. Ann. Mycol. 13., 5221 1915, p. 469. — Stromatibus rotundatis opacis usque 1 mm. latis, solitariis v. paucis aggregatis in maculis flavescentibus 0,5-1 cm. latis insidentibus et folium crassum hypertroficum plus minus efficientibus; loculis perithecialibus 1-5 depresse lenticularibus, quandoque fortiter prominentibus; parietibus stromati subconformibus; ostiolo hypophyllo, breviter papilliformi, flavidulo, demum colla-

bescenti; peritheciis 150-200 µ altis, 170-590 µ latis; ascis brevissimis, cylindraceo-clavatis, apice late rotundatis, singulis ovoideis latioribus 36-42 \* 15-20, octosporis; sporidiis unilocularibus, hyalinis, levibus, elongato-ovoideis, 12 14 \* 4-5.

Hab. in foliis Engelhardtine sp. (Juglandacceae), Salak, Java (RACIBORSKI).

77. Phyllachora cantonensis Sydow, Ann. Mycol. 17., 1919, p. 141. 5222 Maculae utrinque visibiles, usque 1 cm. latae, flavae vel ochraceoflavae, indeterminatae; stromata pluria (3-10) in quaque macula irregulariter aggregata, in utraque foliorum pagina visibilia, 0,5-1 mm. diam., 1-pauci-locularia; loculi totam folii crassitudinem occupantes, 500-700 \mu lati, 350-500 \mu alti, elypeo 25-40 \mu crasso; asci clavati, 65-85 \* 10-16, octospori, copiose paraphysati; sporae plerumque irregulariter monostichae, anguste ellipsoideae vel oblongae, continuae, hyalinae utrinque obtusae, 12-14 \* 5-7.

Hab. in foliis Litseae glutinosae (Lauraceae), pr. Canton, Kwangtung, prov. Sinarum (A. O. REINKING).

78. Phyllachora Nectandrae F. L. Stevens et N. Dalby, Bot. Gazette 5223 68., 1919, p. 57, tab. fig. 23-24. - Maculis rotundatis v. irregularibus, brunneis, stromata circumdantibus, utrinque prominentibus; stromatibus epiphyllis nigris, nitidis, 1-4 mm. diam. parum elevatis, sparsis v. raro confluentibus; loculis singulis v. paucis, subrotundatis, in mesophyllo nidulantibus, 225-500 µ latis 300 µ altis, pariete infra tenui; clypeo nigro 40-50 µ crasso, lateraliter expanso; paraphysibus copiosis filiformibus; ascis cylindraceis, octosporis, 108 × 10; sporidiis oblongis 14 × 5.

Hab. in foliis Nectandrae patentis (Lauraceae), Maricao, Porto Rico. - A Ph. nectandricola Speg. praecipue differt paraphysibus praesentibus.

79. Phyllachora ocoteicola F. L. Stevens et N. Dalby, Bot. Gazette 68., 5224 1919, p. 57, tab. fig. 25-26. - Maculis amphigenis, copiosis, angulosis. 2-4 mm. diam., supra nitide nigris infra pallidioribus, ob loculos rugulosis; clypeo epidermali, utrinque visibilibus, depressis, circ. 17 µ cr.; stromatibus in mesophyllo evolutis; loculis copiosis, in mesophyllo nidulantibus, intus 156-170 μ altis 200-235 μ latis, parietibus hyalinis tenuibus; ascis numerosis octosporis; sporidiis e oblongis cylindraceis, 54 × 17, uno apice parum acutatis; para physibus numerosis, filiformibus, curvulis.

Hab. in foliis Ocoteae leucoxylonis (Lauraceae), Mte Alegrillo, Mte. de Oro, Maricao, Porto Rico. - A Ph. Ocoteae P.

Henn. caracteribus plurimis diversa.

80. Phyllachera uberata Sacc., Ann. Mycol. XI, 1913, p. 16. – Stromatibus laxe gregariis, hemisphaericis, protuberantibus, 1-1,5 mm. lat.,
piceis, nitidissimis, basi innatis, in pag. inferiore foliorum non visibilibus, superficie obtuse parce inaequaliter papillatis, contextu
carbonaceo indistincte celluloso basi subdeficiente donatis, intus
griseo-pallidis, 3-6-locellatis, loculis amplis cavis v. ob vetustatem
bysso albo farctis, 300-400 μ diam.; ascis.. jam absorptis.

Hab. in foliis emortuis v. languidis Persea e spec. (Lauraceae), in Mexico (Bonansea). — Etsi fructificatio ignota, species ob stromata majuscula, protuberantia, atro-nitida, loculosque valde amplos distingui meretur. — Sec. Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 576 a Phyllachora removenda.

81. Phyllachora phoebicola Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5226
Buenos Aires XXIII (1912) p. 91 — Stromatibus solitariis vel rarius 2-3 laxe gregariis, saepissime hypophyllis, semilenticularibus, parvis, nitidulis, areola angusta atra cinctis, 1 2 loculigeris; loculis e mutua pressione angulatis, quandoque confluentibus; ascis subcylindraceis, apice subtruncato-rotundatis, basi leniter cuneatis, crasse breviterque pedicellatis, 120-130 v 10-15, parce filiformi-paraphysatis; sporidiis oblique monostichis, ellipsoideis, utrinque acute rotundatis, non vel grosse 1-guttatis, hyalinis, 16-22 v 8-10.

Hab. in foliis vivis Phoebis porphyriae (Lauraceae), in silvis prope Calilegua, Argentina.

32. Phyllachora disseminata Syd., Ann. Mycol. 14., 1916, p. 82. — Stromatibus in utraque foliorum pagina visibilibus, per totam folii superficiem aequaliter sparsis, minutis, rotundatis 0,5-0,75 mm. diam., maculis minutis ochraceis parum visibilibus insidentibus, haud confluentibus, in epiphyllo planis, in hypophyllo leniter convexis, atris, opacis; clypeo amphigeno, epidermali, opaco, 20-30 μ crasso, leniter expanso; loculis plerumque singulis in quoque stromate, mesophyllum totum occupantibus, applanato-globosis vel sublenticularibus, 180-250 μ latis, 150-170 μ altis, pariete tenui brunneo; ascis cylindraceis, breviter stipitatis, paraphysatis, 60-80 × 10-14, octosporis; sporidiis recte vel oblique monostichis ellipsoideo-oblongis, utrinque plerumque obtusis, continuis, hyalinis, 12-14 × 6-7.

Hab. in foliis Lauraceae, Seringal S. Francisco, Rio Acre Brasilia (E. Ulle).

83. Phyllachora nervicida Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. 5228

Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 128. — Stromata amphy-

gena nervationibus tantum innata, 10-20 mm. long. 2-2,5 mm. diam., illas leniter tumefacientia, atra, levia, loculis periphaericis parvis constipatis astomis; ascis cylindraceis apice rotundatis crasseque tunicatis deorsum modice attenuato-pedicellatis, octosporis paraphysatis, 200 × 14; sporae recte monostichae elliptico-subcylindraceae, primo guttulatae hyalinae laeves serius 2-blastes dense minuteque papilloso-rugulosae, roseo-fumosae, 22-26 × 11 13. An melius *Phaeodothis* species?

Hab. ad folia viva Lauraceae cujusdam, prope Apiahy, Brasilia (J Puiggari).

84. Phyllachora ulcana (Rehm), Physalospora perversa Rehm var. ulcana 5229 Rehm, Hedwigia 40., 1901, p. 113; Syll. XVI p. 460.— Syn. Phyll. accedens Theiss. et Syd., Ann. Mycol. 13., 1915, p. 478 nom. nov.

85. Phyliachora indica Theiss. et Syd., Ann. Mycol. 13., 1915, p. 488. — 5230 Stromatibus amphigenis, opace nigris, depressis, rotundatis, 1-2,5 mm. latis, superficie subpulveraceis; loculis bistratosis, depresse globosis 300-350  $\mu$  latis 180-220  $\mu$  altis; ascis paraphysatis, clavatis, 80-90  $\star$  16-20; sporidiis distichis, hyalinis, unilocularibus, elongato-ellipsoideis, utrinque obtuse rotundatis, 18-20  $\star$  7-8, rectis v. subinaequilateris.

Hab. in foliis Acaciae penninerviae (Leguminosae). Indiae.

86. Phyliachora texana Tharp, Mycologia IX, 1917, p. 118. — Stromatibus magnitudine variabilibus e minute punctiformibus usque
1 mm. diam. et ultra, circularibus, v. confluendo irregulariter lobatis,
utrinque effusis; loculis ascigeris uno v. ultra in quoque perithecio,
ostiolis unilateralibus v. amphigenis; ascis paraphysatis, clavatis,
50-80 × 10-14; sporidiis typice 8 in quoque asco, monostichis v.
distichis, ovoideis utrinque subacutis, hyalinis, unilocularibus, 1219 × 4-5,5.

Hab. in foliis vivis A c a c i a e W r i g h t i i, Cotulla, Texas, Amer. bor. (THARP). — A Ph. Acaciae P. Henn. distincta.

87. Phyllachora Afzeliae Syd., Enum. Philipp. Fungi I, in Philipp. 5232 Journ. of Sci. VIII (1913) p. 277. — Stromatibus epiphyllis, sparsis, leniter prominulis, rotundatis, 0,5-2 mm. latis, nitidulis, atris, intus pluriloculatis, ob loculos prominulos leniter rugulosis; ascis clavatis, 50-60 \* 11-14, octosporis; sporidiis fusiformibus, utrinque acutis, continuis, hyalinis, 18-24 \* 4,5-5,5; stylosporis simul praesentibus filiformibus, varie curvis, continuis, hyalinis, tenuissimis, 17-25 \* 0,75.

Hab. in foliis vivis Afzeliae (Intsiae) bijugae, (Leguminosae), Mindanao, distr. Cotabato, ins. Philipp.

88. Phyllachora Apulciae Speg., Mycet. Argent. VI, Anal Mus. Nac. 5233 Buenos Aires, XXIII (1912) p. 90. — Stromatibus repando-discoideis, 1-3 mm. latis, innatis, atris, levibus, opacis, quandoque simplicibus integris, quandoque compositis, altero centrale fertile majore, caeteris minoribus subcircinantibus, sterilibus cincto, vix prominulis; loculis paucis centralibus, saepe confluentibus, lenticularibus, 120-150 μ diam., astomis; ascis subfusoideis, apice obtuse rotundatis, basi breviter crasseque pedicellatis, 70 × 18, pseudoparaphysibus crassis subcoalescentibus obvallatis, octosporis; sporidis recte distichis vel oblique monostichis, ellipsoideis, utrinque subacutiuscule rotundatis, grosse 1-guttatis, hyalinis, 14 × 7-8.

Hab. in foliis vivis Apuleiae praecocis (Leguminosae), in silvis prope Puerto Leòn, Misiones, Argentina

89. Phyllachora erebia Syd. in Syd. et Butl., Ann., Mycol. IX, 1911, 5234 p. 396, Theiss. et Syd., Ann. Mycol. 13., 1915, p. 493. — Stromatibus amphigenis, sed plerumque epiphyllis, dense confertis confinentibusque, plus minus late effusis et crustaceis, saepe magnam folii partem occupantibus, aterrimis, loculis minutis omnino immersis; aseis cylindraceis, 50-70 × 8-15, octosporis; sporidiis subglobosis, ovatis v. late ellipsoideis, hyalinis, continuis, 9-12 × 6-9.

Hab. in foliis Caraganae sp. (Leguminosae), Harwan, Kashmir, Indiae or. (E. J. BUTLER).

90. Phyllachora canafistulae F. L. Stevens et N. Dalby, Bot. Gazette 5235 68., 1919, p. 55, tab. fig. 5-6. — Maculis stromata non excedentibus; stromatibus latis, 2-5 mm., depressis, nigris, utrinque visibilibus, in mesophyllo evolutis, plurilocularibus; clypeo supra magis prominenti; loculis rotundatis, 155-170 μ diam.; ascis cylindraceis 72-99 \* 16-20; sporidiis e ovoideis ellipsoideis, hyalinis, continuis, 13-16 \* 6-8; paraphysibus filamentosis.

Hab. in foliis Cassiae fistulae (Leguminosae), Mayaguez, Porto Rico. — A Phyll. bakeriana et Phyll. Cassiae omnino diversa.

91. Phyllachora dolichogena (B. et Br.) Sacc., Syll. II p. 601. — var. 5286 Samoensis Theiss. et Syd., Ann. Mycol. 13., 1915, p. 500. — V. Höhnel, Fragm. z. Mykol. n. 129. — A typo recedit stromatibus punctiformis et loculis magis confertis; ascis cylindraceo clavatis, breviter pedicellatis, 62-80 × 12-16, paraphysatis; sporidis monostichis v. distichis, hyalinis, unilocularibus, ovoideis, 12-13 × 8-9.

Hab. in foliis Dolichos sp. (Leguminosae), Upolu, Samoa (RECHINGER).

92. Phyllachora bakeriana P. Henn., Hedw. vol. 48 (1908) p. 106; Rehm, 5237 Ascomyc. n. 1788; Theiss. et Syd., Ann. Mycol. 13., 1915, p. 494.— Maculis flavo-fuscidulis, indeterminatis; stromatibus epiphyllis, gregariis, rotundato-pulvinatis, planis, atris, punctoideo-ostiolatis, 0,6-1 mm. diam; peritheciis immersis, rufo-brunneis, globulosis; ascis subclavatis vel fusoideis, vertice applanatis vel obtusis, octosporis, paraphysatis, 60-80 \* 8-12; sporidiis subdistichis, oblonge fusoideis, utrinque acutis vel rotundatis, subcurvulis, hyalinis, 14-24 \* 4-5.

Hab. in foliis Cassiae Hoffmanseggianae (Leguminosae), hort. bot. Goeldi, Parà (C. F. BAKER). — A Ph. Cassiae P. Henn. omnino distincta.

93. Phyllachora Cratyliae Syd., Ann. Mycol. 14., 1916, p. 83. — Stromatibus epiphyllis, sine maculis, sparsis, minutis, ca. 1 mm. diam., non confluentibus, plerumque fere orbicularibus, lenissime convexis nitidulis, plurilocularibus, in hypophyllo parum manifestis; elypeo epidermali, epiphyllo ca. 25-30 µ crasso, saepe etiam hypophyllo sed minus evoluto; loculis subglobosis, 150-220 µ diam., in mesophyllo sitis, epidermidem hypophyllam attingentibus v. fere attingentibus, pariete 12-14 µ lato brunneo; ascis cylindraceo-clavatis, non vel brevissime stipitatis, 55-70 × 12-14, octosporis, copiosissime paraphysatis; sporidiis oblique monostichis vel distichis, anguste clavatis, superne rotundatis, inferne plerumque attenuatis, continuis, hyalinis 23-26 × 5.

Hab. in foliis Cratyliae floribundae (Leguminosae), Seringal Auristella, Rio Acre, Peruvia (E. ULE).

 Phyllachora dalbergiicola P. Henn.— Syll. XVI p. 619.— fm. Leguminum Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2219.

Hab. in leguminibus Dalbergiae ferrugineae (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

95. Phyllachora lactea Theiss. et Syd., Ann. Mycol. 13., 1915 p. 497.— 5240 Ita vocanda Auerswaldia Dalbergiae P. Henn.

Hab. in foliis Dalbergiae lacteae (Leguminosae), Kilimandscharo, Africae trop.

96. Phyllachora affinis Theiss. et Syd., Ann. Mycol. 13., 1915, p. 498.— 5241

Ita vocanda est Phyll. yapensis (P. Henn.) Syd. var. rhytismoides

Rehm, quia jam extat Phyll. rhytismoides (Corda) Sacc.

Hab. in foliis Derridis philippinensis (Leguminosae),

Los Baños Luzon, Ins. Philippin.

97. Phyliachera spissa Syd. et Syd. et Butl., Ann. Mycol. IX, 1911, 5242 p. 397. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 497. — Maculis irregularibus, usque 1 cm. diam., brunneolis; stromatibus amphigenis, innatis, in maculis dense aggregatis, minutissimis, punctiformibus, 140-230 μ diam., atris, 1-locularibus, rarissime binis confuentibus et tunc 2-locularibus, convexulis, minute ostiolatis; ascis oblongo-clavatis, copiose paraphysatis, apice obtusis, brevissime stipitatis, 55-62 × 14-18, octosporis; sporidiis oblique monostichis v. distichis, ellipsoideis usque oblongis, utrinque obtusis, continuis, hyalinis, 12,5-16,5 × 5,5-6,5.

Hab. in foliis Dalbergiae Sissoo (Leguminosae), Wy-

naad, Indiae or. (W. Mc RAE).

98. Phyllachora yapensis (P. Henn.) Syd., Enum. Philipp. Fungi I, in 5243
Philipp. Journ. of Sci. VIII (1913) p. 278. — Dothidella yapensis
P. Henn. — Syll. XVII p. 848. — Auerswaldia Derridis P. Henn.,
Syll. XXII p. 428, Phyllachora Lagunae Rehm, Ascom. Philipp. III,
in Philipp. Journ. of Sc. VIII, 1913, p. 396. — Cnfr. Theiss. et Syd.,
Ann. Mycol. 13., 1915, p. 498; Sydow, Philipp. Journ. of Sc. IX
Sect. C., 1914, p. 168. — Teste cll. Sydow, specimina originalia
sporidiis continuis nec bilocularibus gaudent, inde species ad gen.
Phyllachoram adscribends.

Hab. quoque in foliis Derridis spp. (Leguminosae), in Ins. Philipp., Derridis ellipticae, Ins. Yap (Carolina), Ins. Java. — Verisim. huc pertinet etiam Cryptomyces Pongamiae Racib. nec (B. et Br.) Sacc.

99. Phyllachora affinis Theiss. et Syd., Ann. Mycol. 13., 1915, p. 498 5244 nom. nov., Phyllachora yapensis (P. Henn.) Syd.—Syll. XVII p. 848.—var. rhytismoides Rehm, Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2218.—Stromatibus epiphyllis, irregulariter orbicularibus, 5 mm. usque latis, loculos plurimos includentibus. Ceterum ut in specie.

Hab. in foliis Derridis philippinensis (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO). — Primo aspectu Rhytisma videtur. — Sporidia, sec. Auct., 1-cellularia, guttis 2 magnis replete.

100. Phyllachora Lathyri (Lév.) Theiss. et Syd., Ann. Mycol. 13., 1915, 5245
p. 501. — Syn. Diachora Onobrychidis (DC.) J. Müll., Syll. XI p. 3.4,
Mazzantia fennica Lind, Ann. Mycol. 13., 1915, p. 22, fig. 2.

101. Phyllachora Lonchocarpi Har. et Pat. in Bull. Mus. Hist. Nat. 5246

Paris 1911, p. 367; Theiss. et Syd., Ann. Mycol. 13., 1915, p. 503.— Epiphylla; stromatibus irregulariter angulosis, 1-3 mm. diam., nitidis, vix ostiolorum ope punctulatis, bullatis; loculis numerosis (10-15); ascis clavatis, paraphysatis, octosporis,  $100 \approx 20$ ; sporidiis irregulariter distichis, hyalinis, ellipsoideis,  $14-16 \approx 9$ .

Hab. in foliis languidis, fere exsiccatis, Lonchocarpi (Leguminosae), Chari: Dar-Rounda, Dialmada, Congo gallico.

102. Phyllachora Pahudiae Syd., Enum. Philipp. Fungi I, in Philipp. 5247

Journ. of Sci. VIII (1913) p. 277 — Rehm, Ascomyc. n. 2048;

Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 506. — Stromatibus epiphyllis, in hypophyllo plus minusve conspicuis, innatis, lenissime prominulis, in greges circulares 3-10 mm. diam. concentrice dispositis, minutis, rotundatis, 0,25-0,5 mm. diam., subinde confluentibus et majoribus, atris; ascis... jam resorptis; sporidiis fusiformibus, utrinque attenuatis, continuis, hyalinis, 16-19 \* 3,5-5.

Hab. in foliis vivis Pahudiae rhomboideae (Leguminosae), Cebu, ins. Philipp.

103. Phyllachora Peltophori P. et H. Syd., Ann. Mycol. X, 1912, p. 40; 5248
Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 507. — Stromatibus amphigenis, sparsis v. irregulariter aggregatis, perexiguis, <sup>1</sup>/<sub>3</sub>-0,5 mm. diam., leniter convexis, 1-paucilocularibus, atris; ascis clavatis, 65-80 × 14-18, octosporis; sporidiis oblique distichis usque subdistichis, ellipsoideis, 13-17 × 6-8, utrinque rotundatis, continuis, hyalinis.

Hab. in foliis Peltophori africani (Leguminosae), Ledgee Zoutpansberg, Transvaal (E. M. DOIDGE).

104. Phyllachora Phanerae Bacib. in Theiss. et Syd., Ann. Mycol. 13., 5249 1915, p. 490. — Stromatibus epiphyllis, solitariis, rotundatis, carbonaceis, nitidulis usque 0,8 mm. latis in maculis flavescentibus insidentibus; loculis 2-4 in medio stromatum sitis rotundatis v. parum depressis 200 μ circ. diam., ostiolo punctiformi et parietibus pallide brunneis tenuioribus praeditis; paraphysibus filiformibus, hyalinis; ascıs elongato-tylindraceis, apice rotundatis, medio latioribus utrinque angustatis, 90-110 × 15-18, octosporis; sporidiis monostichis, hyalinis, unilocularibus, levibus, 14-16 × 9.

Hab. in foliis Phanerae sp. (Leguminosae), Tjampea prope Buitenzorg, Java. — Socia Dethiopsis Phanerae Rac. cuius status pyenidicus verisimiliter sistit. — Var. longispora Theiss. et Syd., l. c. p. 491. — Phyll. tenuis v. Höhn. nec B. et C. — A typo recedit sporidiis longioribus, 20-27 \* 5-6,5. — Hab. in foliis Phanerae

glaucae, Buitenzorg, Java.

105. Phyllachora phaseolina Syd., Enum. Philipp. Fungi II, in Philipp. 5250 Journ. of Sci. VIII 1913) p. 494; Theiss. et Syd., Ann. Mycol. 13., 1915, p. 507. — Stromatibus epiphyllis, sparsis, leniter convexis, in hypophyllo non vel parum conspicuis, irregularibus, minutis, 0,4-1 mm. diam., atris, opacis, intus paucilocularibus; aseis cylindraceis vel clavatis, 40 50 \* 10-14, octosporis; sporidiis subglobosis vel late ellipsoideis, continuis, hyalinis, 8-10 \* 5-7.

Hab. in foliis Phaseoli calcarati (Leguminosae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER).

106. Phyllachora? piptadenicola Speg., Mycet. Argent. VI, Anal. Mus. 5251 Nac. Buenos Aires, XXIII (1912) p. 91. — Maculis nullis vel vix manifestis pallescentibus; stromatibus (peritheciis?) epiphyllis, gregariis vel hinc inde confertis sed non confluentibus, parenchymate innatis, minutis, prominulo convexis, 180-250 μ diam., atris, nitidis, obsolete ostiolatis, unilocularibus, coriaceis, contextu indistincto; ascis subfusoideis, breviter cuneato-pedicellatis, 60-70 × 14-15, paraphysibus filiformibus parum longioribus parce obvallatis; sporidiis oblique 2-3-stichis, subellipsoideis, inaequilateris, utrinque subacutiusculis, eguttulatis, hyalinis, 14-16 × 6-7.

Hab in foliis vivis Piptadeniae rigidae (Leguminosae), in silvis prope Puerto Léon, Misiones, Argentina.

107. Phyllachora Pusaethae v. Höhn., Fragm. zur Mykol. 771 in Stzgsb. 5252 Akad. Wiss. Wien CXXI, I, p. 389. — Syn. Phyll. Entadae Rac. ined. sec. Theiss. et Syd., Ann. Myc. 13., 1915, p. 508. — Stromatibus sparsis, singulis in maculis luteolis evanescentibus 2-3 mm. latis insidentibus, applanatis, circularibus, carbonaceis, nitidis, utrinque conspicuis, 0,3-1 mm. latis, 1-2-5-locularibus, contextu stromatis opaco, atro; loculis in sectione e rotundato angulatis, 150-300 μ latis, 240 μ altis, ostiolo minuto circulari pertusis; ascis fusoideo-clavatis basi in pedicellum 20 × 4 productis, apice conoideo-attenuatis, 50 80 × 10-12, paraphysibus tenuibus curvulis obvallatis; sporidiis oblique distichis, oblongo-ellipsoideis, hyalinis, rectis, utrinque rotundatis, 12-13 × 4-5.

Hab. in foliis vivis Pusaethae (Entadae) sp. (Leguminosae), in horto botan. Buitenzorg, Java. — Stromata interdum in maculis majoribus non propriis insidentia.

108. Phyllachora umbilicata Theiss. et Syd., Ann. Mycol. 13., 1915, 5253
 p. 510. — Rehm, Ascom. exs. n. 1565 (sub Phyll. Trifolii). — Stromatibus arcte gregariis, confluentibus minutis, prominentibus, um-

bilicatis, folium incrassantibus usque 240-280  $\mu$  (folium normale 140-170  $\mu$  cr.); localis plerumque numerosis, globosis v. depresse globosis, 140-165  $\mu$  latis,  $^2/_s$  folii occupantibus nec hypophyllum attingentibus; stratu ascigero typice phyllachoroideo; ascis breviter pedicellatis, 56-65  $\times$  11-14, modice paraphysatis; sporidiis monostichis, unilocalaribus, hyalinis, ellipsoideis, utrinque obtuse rotundatis, 11  $\times$  5,5-6.

Hab. in foliis Trifolii Wormskiöldii (Leguminosae), Montana Point, California (COPELAND).

09. Phyllachora Smilacis Gz. Frag. Flor. Microm. Catal. 1917, p. 99, 5254 fig. 17. — Stromatibus irregularibus, 0,5-1 mm. lat., nigris, opacis, loculis paucis applanatis, subastomis; ascis oblongo-clavatis, 48-54 × 26-30, breviter pedicellatis, apice rotundatis crassiuscule tunicatis; paraphysibus filiformibus, guttulatis, subramosis; sporidis irregulariter distichis, ovoideo-oblongis uno apice obtusioribus, 15-17 × 7-9, guttulis minutis et majusculis praeditis, continuis.

Hab. in sarmentis emortuis Smilacis asperae (Liliaceae), La Rabasada pr. Barcelona, Hispaniae.

110. Phyliachora Hugoniae Theiss et Syd., Ann. Mycol. 13., 1915, p. 5255 512. — Stromatibus arcte gregariis foliicolis, utrinque visibili bus, irregulariter rotundatis, 1-2 mm latis, depressis, parum prominentibus, nitide nigris, in hypophyllo parum elevatis, in epiphyllo minute ostiolatis; clypeo amphigeno epidermali 30-36 μ crasso; loculis folium percurrentibus, parum inter se remotis, depresse globosis, 300-400 μ latis 250 μ altis, parietibus tenuioribus (8-10 μ) brunneis praeditis, praecipue ad apicem hyphis stromaticis radiantibus praeditis; ascis cylindraceis, paraphysatis, 60-70 \* 8-10; sporidiis monostichis, hyalinis, unilocularibus, ellipsoideis, rotundatis, 11 \* 5,5.

Hab. in foliis Hugoniae mystax (Linaceae), Ceylon, Asia.

111. Phyllachora Banisteriae F. L. Stevens et N. Dalby, Bot. Gazette 5256
68., 1919, p. 54, tab. fig. 1-2. — Maculis nullis; stromatibus numerosis, sparsis, 1-2 mm. diam., rotundatis v. saepius elongatis, nigris, utrinque visibilibus, in mesophyllo parce evolutis; clypeo amphigeno, tenui, ab epidermide limitato; loculis paucis, latis, circ. 190 \* 270; ascis octosporis cylindraceis; sporidiis oblongis, hyalinis, continuis, 35 \* 14. — Conidia septorioidea, in pycnidiis supra stromata evolutis.

Hab. in foliis Banisteriae tomentosae (Malpighiaceae), Vega Baja, Porto Rico. — A Ph. pestis-nigra Speg. pluribus notis diversa.

112. Phyllachora Melastomacearum Racib. in Theiss. et Syd., Ann. Myc. 5257 13., 1915, p. 540. - Pseudostromatibus epiphyllis rotundatis v. polygoniis, usque 9 mm. latis, nigris, in maculis pallidis angustis et zonula nigro-violacea latiori limitata insidentibus; loculis 2-5 depresse globosis in folio omnino immersis, minute ostiolatis; loculis 100-140 µ altis 130-180 µ latis parietibus brunneis limitatis; ascis copiose paraphysatis, cylindraceis apice angustatulis, obtusis, octosporis, 98-106 × 12-14; sporidiis unilocularibus, ovoideis, levibus. hyalinis, monostichis,  $10.13 \times 6$ .

Hab. in foliis Dissochaetae sp. (Melastomaceae). Tiibodas in Gedeh et in Tankvetan Prave.

113. Phyllachora Heterotrichi F. L. Stevens et N. Dalby Bot. Gazette 52:8 68., 1919, p. 56 (corr. heterotrichae), tab. fig. 9-10. - Maculis parvis 2-4 mm. diam., subcircularibus, pallidis utrinque visibilibus; stro. matibus nigris, ambitu irregularibus infra magis prominentibus, 1-2 mm. diam., totam crassitudinem foliorum occupantibus et majorem quam in parte normale foliorum; clypeo epidermico epiphyllo et saepe ultra perithecia effuso, in hypophyllo strictiore; loculis numerosis circ. 110-150 \mu diam., parietibus bene evolutis: ascis octosporis; sporidiis 13-14 × 3,5-4, continuis, hyalinis.

Hab. in foliis Heterotrichi cymosi (Melastomataceae). Villa Alba, Porto Rico. - A Ph. Melastomacearum Rac. stromatibus a Ph. aliena peritheciis distincte minoribus diversa.

114. Phyllachora aliena H. et P. Syd., Ann. Mycol. X, 1912, p. 407. - 5259 Stromatibus epiphyllis, sparsis v. aggregatis, saepe annuliformiter dispositis confluentibus et tunc annulatis spatium medium vacuum relinquentibus, 1-2,5 mm. diam., primitus extus dilute brunneis. tandem atris, opacis, levibus, tennibus, intus albidis; loculis ca. 8-20 in quoque stromate, rotundatis, omnino immersis, 125-150 µ diam.; ascis plerumque cylindraceo-clavatis, 80-100 × 9-10, octosporis; sporidiis monostichis, ellipsoideo-oblongis, utrinque rotundatis. continuis, hyalinis,  $9-12 \times 4-5$ .

Hab. in foliis Memecyli edulis (Melastomaceae), Matheran, Bombay Presid., Indiae or. (S. L. AJREKAR).

15. Phyllachora neomexicana Trotter n. nov. - Phyllachora mexicana 5260 Sacc., Ann. Mycol. XI, 1913, p 546, nec Turconi, Syll. XVII p. 832. - Stromatibus hypophyllis, subsuperficialibus, 10.20 hine inde in soros laxe congregatis, aterrimis, 0,5 mm. diam., loculis globosis nonnihil protuberantibus, 100 μ diam., poro minuto pertusis; ascis

cylindraceis, apice rotundatis, crasse brevissimeque pedicellatis,  $95-98 \times 11-11,5$ , paraphysibus filiformibus copiosis multo superantibus (h. e.  $140-160 \times 7-9$ ) hyalinis obvallatis; sporidiis oblique monostichis ellipsoideis,  $12-14 \times 9-11$ , dilutissime chlorinis, senio fuscellis, levibus.

Hab. in foliis nondum emortuis Miconiae p. (Melastomataceae), Oaxaca (Mexico). — A Phyll. Miconiae P. Henn. (non Duby) ascis cylindricis, a Physalospora Miconiae (Duby) Sacc. stromatibus exclusive hypophyllis, a Phyll. Sellowii P. Henn sporidiis multo crassioribus, stromatibus non sparsis etc. dignoscenda species. Fungus Dubyi videtur affinior et aptius Phyllachora Miconiae (Duby) Sacc., nuncupandus; tunc species homonyma Henningsii, Phyllachora Henningsiana Sacc. dicenda est. — Phyllachora laurina Cke, teste Theissen et Syd., Ann. Mycol. 13., 1915, p. 568, non differt, sed revera in Miconia, non in Lauro nascitur.

116. Phyliachora miconiicola Spegaz., Fungi Costaric. noun. in Bol. Ac. 5261 Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 205. — Epiphylla; maculae orbiculares, 2 6 mm. diam. centro rufescentes. ambitu late atro-caerulescentes indeterminatae; stromată în parte centrali macularum innato-prominula, parvula, 120-200 μ diam saepius 2-5-gregaria ac confluentia, atra, laevia, opaca, perforato-ostiolata, contextu indistincto; asci cylindracei paraphysati 8 spori, breviter pedicellati 90-100 × 12; sporae ellipticae utrinque acutiusculae, non v. grosse 1-guttulatae, laeves, hyalinae, 15 × 7-8.

Hab. in foliis vivis Miconia e cujusdam ignotae, in silvis Volcàn de Poas, Costarica, America trop.

117. Phyllachora Mouririae Syd., Ann. Mycol., 14., 1916, p. 83.— Stromatibus utrinque perspicuis, sparsis, rotundatis, 11,5 mm. diam., atro-nitidis, ob loculos prominulos rugulosis, paucilocularibus, totam folii crassitudinem occupantibus, sine maculis; elypeo in utraque epidermide, 60-80  $\mu$  crasso, densissimo, opaco, aterrimo; loculis variabilibus, mox altioribus quam latioribus, mox e contra latioribus quam altioribus usque 350  $\mu$ ; ascis cylindraceis, 80-100  $\times$  10, paraphysatis, octosporis; sporidiis plerumque oblique monostichis, fusiformibus, utrinque leniter attenuatis, continuis, hyalinis, 18-22  $\times$  4.

Hab. in foliis Mouririae Apirangae (Melastomataceae), Seringal Auristella, Peruvia.

118. Phyllachora Meliae Pat., Bull. Soc. Mycol. Fr. 29., 1913, p. 226.— 5263 Stromatibus epiphyllis, sparsis, parvis, angulosis, orbicularibus v. elongatis, nitidis, convexis, glabris, 1-5 locularibus, ovoideis, nucleo

mucoso albo praeditis; ascis clavatis, 4,5-7,5 × 15-18, octosporis: paraphysibus cylindraceis, hyalinis, mucosis, septatis, 3-4 µ cr.; sporidiis distichis, hyalinis, ovoideis, 10-12 > 5-6, contextu primum granuloso dein aequali.

Hab, in foliis Meliae Azedarach (Meliaceae), Hanoi Tonkin, Cinae (DUPORT).

119. Phyllachora Bersamae Lingelsh., Engler, bot. Jahrb. 39., 1907, 5264 p. 604. - Maculis primo carbonaceo-nigris dein flavido-fuscis; ostiolis punctiformibus v conicis, nigris gregariis; peritheciis immersis, nigris, applanatis, maturis 150-170 µ alt. 450-480 µ latis; ascis octosporis clavatis 60-70 µ long., membrana tenuissima praeditis: sporidiis mono-v. distichis, flavidis, ellipsoideis, 14-16 × 9,5-10, biguttulatis oleosis instructis, paraphysibus hyalinis filiformibus.

Hab, in foliis Bersamae abyssinicae (Melianthaceae), Deru, prov. Tschertscher, 2300 m. alt., Aetyopia. - Sec. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 565, eadam est ac Physalospora Bersamae Syd., Syll. XXII p. 82.

120. Phyllachora dolichospora Syd. in Syd. et Butl., Ann. Mycol. IX, 5265 1911, p. 396, Theiss. et Syd., Ann. Mycol. 13., 1915, p. 476.—Stromatibus amphigenis, sparsis, irregularibus, rotundatis v. saepe angulatis, planis vix vel lenissime rugulosis, atris, usque 3 mm. long., loculis numerosis, dense stipatis, globosis, 140-200 µ diam.; ascis cylindraceo-clavatis, rectis vel curvulis, utrinque saepe attenuatis, 70-80 × 8-15, octosporis; sporidiis fusiformibus, utrinque attenuatis et plus minus acutis, continuis, hyalinis, in cumulo flavidis, 21-26 \* 4-6.

Hab. in foliis Tinosporae cordifoliae (Menispermaceae), Solebile, Mysore, Indiae or. (E. J. BUTLER).

121. Phyllachora Cannabidis P. Henn., Hedw vol. 48 (1908) p. 8. — 5266 Stromatibus caulicolis dense gregariis, plano-pulvinatis, atro-opacis, angulato-rotundatis; ascis clavatis, apice rotundatis, octosporis, 45-55 × 10-12; sporidiis oblique monostichis vel distichis, subfusoideis vel ovoideis, hyalinis, continuis, nubilosis, 12-17 × 5-6.

Hab. in caulibus Cannabidis sativae (Moraceae), Capital, S. Paulo, Brasilia. - Sec. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 565, ad Clypeosphaeriaceas pertinet nec ad Phyllachoraceas.

122. Phyllachora pseudes Rehm, Ascomyc. Philipp. III, in Philipp. 5267 Journ. of Sci. VIII (1913) p. 396. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 470. — Stromatibus gregariis, folio plane innatis, utrinque dilute flavidule tectis, paginam superiorem folii protuberanti-

bus ibique papillulis conoideis nigrescentibus prominentibus conspicuis, atris, subglobosis, 1 mm. circiter diam., loculos 3-5 includentibus, demum elapsis lacunulam in folii parenchymate relinquentibus; ascis clavatis, octosporis, aparaphysatis, 60 \* 15; sporidiis distichis, oblongis, utrinque rotundatis, continuis, haud guttatis, hyalinis, 10-12 \* 6-9.

Hab. in foliis Fici notae, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER). — Ob stroma in parenchymate omnino evolutum ut typus novi generis Endophyllachora Rehm habenda. — Affinis videtur Phomatospora elastica Zimm. sed aseis sporidiisque diversis.

123. Phyllachora Dawei Massee, Bull. Bot. Garden Kew 1908, p. 218.— 5268
Stromatibus epiphyllis, superficialibus, effuso-crustaceis, bullatis, atris, rugulosis, 4-7 mm. diam., subglobosis, laxe aggregatis vel confluentibus, dense loculiferis, contextu indistincto; loculis saepe confluentibus, difformibus; ascis cylindraceis, apice rotundatis, deor sum attenuato-pedicellatis, 80-100 × 11 12, octosporis, dense paraphysatis; sporidiis oblique monostichis, hyalinis, ellipsoideis, utrinque rotundatis, continuis, 21-23 × 9-10.

Hab. in foliis vivis Ficus sp., vulgo «Kokamve» dicta, Buddu, Uganda, Afr trop. (DAWE). — Ph. repenti Sacc. cognata; differt stromatibus latioribus non seriatis, sporidiisque crassioribus.

124 Phyllachora Pittieri Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 5269
544. — Ita vocanda est Phyll. Tonduzii P Henn. nec Bomm. et
Rouss. — Syll. XVII p. 835. — In Myrsinaceis.

125. Phyllachora gentilis Speg. — Syll. XI p. 369. — Var. Calyptranthis 5270 Patouill., Bull. Soc. Mycol. 1912, p. 141. — Stromatibus sparsis, 1-3 mm diam., orbicularibus v. confluendo angulosis, convexis, nigris lucidis, levibus v ostiolis tantum punctulatis; maculis in foliis nullis in fructibus ex aureola rubrida constitutis; loculis paucis; ascis clavatis, apice rotundatis basi stipitato-attenuatis, 75-85 × 20, paraphysibus linearibus 2-3 μ cr., contentu granuloso subgelatinoso; sporidiis distichis, hyalinis, ellipsoideo-obtusis, 18-20 × 7, centro grosse uniguttulatis, tunica crassa praeditis; spermogoniis immixtis, sporulis filiformibus, hyalinis 15-18 × 1-1,5, copiosis.

Hab. in foliis fructibusque Calyptranthis Tonduzii (Myrtaceae), San Josè Costa Rica, America Centr.

126. Phyllachora Rickiana Theissen, Ann. Mycol. 16., 1918, p. 185, 5271.
Dothidella? placentiformis Rehm, Ascom. 1790, Theissen Dec. fung.
brasil. 40-41. — Clypeo epidermali amphigeno 2-3 mm. lato, extus

nitide nigro, inflato, folium usque 500  $\mu$  cr. (nec 279  $\mu$  ut in folio normale), 40-50  $\mu$  cr.; peritheciis globosis collo terminatis, circ. 400-430  $\mu$  altis et latis, distinctis, in epiphyllo aperientibus, membrana brunnea distincta crassitudine variabili praeditis; ascis lateraliter radiantibus, paraphysatis, 68-78  $\times$  14-15; sporidiis distichis ellipsoideis, 10-13  $\times$  6, hyalinis, unilocularibus.

Hab. in foliis C am p o m an e si a e sp. (Myrtaceae), Rio Grande do Sul, Brasilia (Theissen).

127. Phyllachera ambigua (Syd.) Syd., Ann. Mycol. 13., 1915, p. 537, 5272
Trabutia ambigua Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, p.
411; Theiss. et Syd., Ann. Mycol. 13., 1915, p. 537. — Stromatibus epiphyllis, sparsis, planis, rotundatis v. irregularibus, 1,5-4 mm. long., atris, opacis, haud typice evolutis, perithecia crusta atra stromatica obtegentibus; peritheciis numerosis in quoque stromate, contextu foliorum omnino immersis, in hypophyllo etiam sed paullo manifestis, irregulariter distributis v. dense aggregatis, globosis, 150-200 μ diam., pariete proprio praeditis; ascis cylindraceis v. cylindraceo-clavatis, 48-60 × 8-12, octosporis; sporidiis plus minus irregulariter monosticnis usque subdistichis, subglobosis v. late ellipsoideis, continuis, hyalinis, 9-11 × 6-8.

Hab. in foliis Eugeniae Jambolanae (Myrtaceae), Koppa Mysore, Indiae or. (E. J. BUTLER).

128. Phyliachora rimulosa Spegaz., Fungi Costarie. nonu., in Bot. Ac. 5273 Nac. Cienc. Cordoba, t. 23, 1919, Extr. p. 206. — Stromata epiphylla, irregulariter repando-elliptica, definita, tenuia, planiuscula, foveolis nonnullis pusillis rotundis impressis centro minute papillato-umbilicatis notata, primo laevia non v. vix subnitidula, serius opaca dense reticulato-rimulosa atque cortice crustoso frustulatim deciduo vestita; loculi parum numerosi, sub foveolis tantum siti, applanato-lenticulares minuti, 150-180 μ diam., eximie minuteque papillato-ostiolati; asci cylindracei, antice rotundati, postice breviter cuneato-pedicellati, 8-spori, paraphysati, 85-100 × 10; sporae oblique monostichae, ellipticae, utrinque rotundatae, saepius grosse triguttulatae, hyalinae, 14 × 8.

Hab. in foliis vivis Engeniae (?costaricensis), (Myrtacene), prope S. Josè Costarica, America trop.

129. Phyllachora angustispora Spegaz., Rel. Mycol. trop. etc. in Bol. 5274

Ac. Nac. Cienc. Cordoba, t. 23., 1919, p. 127. — Stromata saepius hypophylla repando-orbicularia, 0,5-2 mm. diam..innato-superficialia convexula leniter calliculosa, atra opaca v. vix nitidula; loculi sae-

pius pauci subglobosi, 120 × 150 μ diam. albo-farcti; asci subclavulati, apice subtruncati, deorsum sensim modiceque attenuato-pedicellati, octospori, aparaphysati 80-90 × 12-14; sporae recte distichae angustae utrinque attenuatae subacutiusculae, non v. vix inaequilaterales, hyalinae, 30 × 8-9.

Hab. ad folia viva Eugeniae sp. (Myrtaceae), prope Recoleta, Asunción, Paraguay, America austr. trop: (J. D. Anisitz). - Proxima Phull. tropicali Speg.

130. Phyllachora curvulispora P. Henn., Hedw. vol. 48 (1908) p. 7.- 5275 Stromatibus epiphyllis, sparsis vel aggregatis, rotundato-pulvinatis, 3.5 mm. diam., atro-nitentibus, localis subglobosis, ostiolis vix prominulis; ascis clavatis, obtusis, octosporis, 60-80 × 10-20; sporidis subdistichis, fusoideis, curvulis, hyalinis, intus granulosis, continuis,  $17.20 \times 5.7$ .

Hab. in foliis Myrtaceae, Morro Pellado, S. Paulo, Brasilia. 131. Phyllachora Nepenthidis Rac. in Theiss. et Syd., Ann. Mycol., 13., 5276 1915, p. 484. - Stromatibus irregulariter sparsis, nigris, intus subcarbonacis, rotundatis v. breviter ellipsoideis prominentibus, 2-3 mm. latis, parum nitidis, zona angusta flaviduia circumdatis; loculis 2-3, v. usque 10 et tunc anulatim dispositis, in hypophyllo minute ostiolatis, depresse ellipsoideis 150-180 u altis 200-300 u latis; paraphysibus filiformibus; ascis cylindraceis, tenuiter tunicatis, apice rotundatis, 130-140 \* 8-11, octosporis; sporidiis monostichis, ovato-globosis, levibus, hyalinis, 8-10 × 6-7, utrinque late rotundatis.

Hab. in foliis Nepenthis melamphorae (Nepenthaceae), Gunung Gagak prope Salak, Java (RACIBORSKI).

132. Phyllachora Maveneae F. L. Stevens et N. Dalby, Bot. Gazette, 5277 68., 1919, p. 56, tab. fig. 14. - Maculis irregulariter circularibus indefinitis folium pallidiorem reddentibus, 3-15 mm. diam.; stromatibus numerosis (5-50) nigris punetiformibus, utrinque aequaliter visibilibus, 200-1000 µ diam., mesophyllum occupantibus; clypeis amphigenis sed stromata vix leniter excedentibus; stromatibus unilocularibus; loculis latis, globosis, ascis numerosis, 58-85 \* 18-27; paraphysibus filiformibus; sporidiis 9-19 \* 7-12, hyalinis continuis,

Hab. in foliis Mayepeae domingensis (Oleaceae), Moricao, Mayaguez Mesa, Coamo, Porto Rico.

133. Phyllachora Roystoneae J. R. Johnston et St. C. Bruner, Myco- 5278 logia 10., 1918, p. 43, tab. 2. - Stromatibus subcutaneis epidermide et mesophyllo innatis, nigris carbonaceis, gregariis, in greges elongatos (2-5 cm. × 1-6 mm.) congestis; stromatibus singulis e

subrotundatis subellipticis e convexis conico-convexis plerumque 0,3-1 mm. diam.; loculis subrotundatis in stratum confertis 260-430  $\mu$  diam., ostiolo erumpenti praeditis indistincto v. leniter papilliformi; ascis clavatis apice rotundatis v. subapplanatis stipitatis, 116-186  $\approx$  12-20, octosporis; paraphysibus nullis v. mox evanidis; sporidiis irregulariter e monostichis subdistichis, fusoideis, utrinque subacutis, hyalinis, tenuiter tunicatis; granuloso-farctis, plerumque multiguttulatis, 22-28,4  $\approx$  8-10.

Hab. in foliis vivis Roystoneae regiae (Palmae), Rincon Havana, Cuba.

- 134. Phyllachora aequatoriensis Theiss. et Sydow, Ann. Mycol. 13., 5279
  1915, p. 521. Ita vocanda Phyll. dendritica Rehm (Syll. XI p.
  371) nec dendritica Cke quae anterior. In Polygalaceae.
- 135. Phyllachora Rhopalae P. Henn., Hedw. vol. 48 (1908) p. 7.— Strosz80 matibus epiphyllis, gregariis, angulato-pulvinatis, atro-nitentibus, 3-4 mm. diam., loculis subglobosis, immersis, fuscis; ascis clavatis, vertice obtuse rotundatis, octosporis, paraphysatis, 100-110 μ longis, p. sp. 80-90 × 9-11; sporidiis oblique monostichis, ellipsoideis, continuis, hyalinis, 12-18 × 6-7.

Hab. in foliis R h o p a l a e b r a s i l i e n s i s (Proteaceae), Morro Pellado, S. Paulo, Brasilia. — A Ph. rhopalina (Mont.) Sacc. distincta.

136. Phyllachora vesicata Cooke, Grev. XIII p. 63; Theiss. et Syd., 5281 Ann. Mycol. 13., 1915, p. 485. — Hypophylla; maculis fuscis, irregularibus, confluentibus, stromatibus gregariis, atris, oblongo-angulatis, convexis, minutis; loculis immersis, albis; ascis clavatis; sporidiis ellipticis, continuis, hyalinis, 10 \* 4.

Hab. in foliis Hirtellae vesicatae (Rosaceae), Amazonas (SPRUCE).

137. Phyllachora Physocarpi Jacz., Fungi Ross. exs. n. 290; Theiss. et 5282 Syd., Ann. Mycol 13., 1915, p. 486. — Stromatibus gregariis, prominentibus, maculis rubridis limitatis, minutis, 0,25-0,4 mm. latis, 13 locularibus; clypeo epidermoidali, epaco; loculis globosis 120 140 μ v. depressis et usque 200 μ latis, 130-160 μ altis; ascis clavatis, pedicellatis, paraphysatis, 60-70 × 16-20; sporidiis polystichis, hyalinis, unilocularibus, elongatis, 16-18 × 6-7.

Hab in foliis Physocarpi (Spiraeae) amurensis (Rosaceae), Amur, Asiae.

138. Phyliachora ixorae Theiss. et Syd., Ann. Mycol. 13., 1915, p. 553. — 5283 Stromatibus epiphyllis, sparsis, 1-2 mm. circ. latis, nitide nigris,

rotundato-prominulis, zonula angusta limitatis, in hypophyllo non conspicuis, plurilocularibus; loculis in elypeo nigro epidermoidali 40-50  $\mu$  cr. immersis mesophyllum incrassantibus, 300-380  $\mu$  latis, 240-280  $\mu$  altis, arcte confertis, parietibus stromaticis tenuibus mollibus, brunneis praeditis; stromate hyphali inter loculos sito hinc inde incrassato; aseis cylindraceis, paraphysatis, breviter pedicellatis, octosporis, 65-80  $\times$  8-10; sporidiis monostichis, elongato-ellipsoideis, utrinque rotundatis, rectis, hyalinis, unilocularibus, 9-11  $\times$  4-5.

Hab. in foliis I x o r a e par v i f o l i a e (Rubiaceae), Indiae or. (HOBSON).

139. Phyliachora Glycosmidis Petch, Ann. R. Bot. Gard. Peradeniya, 5284 v. VI, P. III, 1917, p. 227. — Stromatibus rotundatis, ad 2 mm. diam., multilocularibus, loculis ad 0,3 mm. diam., ostiolis non prominentibus; ascis cylindraceis, circa 100 × 6, longe pedicellatis, sporis oblique uniseriatis; sporis oblonge ovoideis, obtusis, hya linis continuis, 8 12 × 4-5.

Hab. in foliis Glycosmis pentaphyllae (Rutaceae), Nalanda, Ceylon.

140. Phyliachora Meliosmae Bacib. in Theiss et Syd., Ann. Mycol. 13., 5285 1915, p. 527. — Stromatibus rotundatis, nigris, 2-3 mm. latis, irregulariter sparsis in macula pallide flava insidentibus; loculis usque 15, parum distinctis ostiolo vix prominenti praeditis, usque 300 μ latis usque 250 μ altis; paraphysibus filiformibus; ascis cylindraceo-fusoideis, medio latioribus apice obtusis, 80 × 8, octosporis; sporidiis hyalinis, monostichis medio quandoque distichis, ovoideis, utrinque aeutatis, 13 × 5 6.

Hab. in foliis Meliosmaesp. (Sabiaceae), Depok prope Buitenzorg, Java.

141. Phyllachora Serjaniae Speg., Mycet: Argent. VI, Anal. Mus. Nac 5286 Buenos Aires XXIII (1912) p. 92. — Maculis amphigenis circularibus, 5-15 mm. diam., indeterminatis, parum manifestis, pallescentibus; stromatibus epiphyllis, mediocribus circinantibus, repandulosuborbicularibus, 1-3 mm. diam. vix convexulis, nigris, glabris, nitidulis; loculis pluribus, lenticularibus, 180-220 μ diam., obsolete ostiolatis, albo-farctis; ascis cylindraceis longiuscule pedicellatis, p. sp. 80-100 × 15-20, pedicello 20-30 × 5-10, parce paraphysatis vel etiam paraphysibus carentibus; sporidiis e cylindraceo-ellipsoideis, utrinque obtusissimis, saepius grosse 1-2-guttulatis, hyalinis, 15-20 × 10-12. Jodi ope nulla.

Hab. in foliis vivis Serjaniae caracasanae (Sapin-

daceae), in silvis prope Calilegua, Salta, Argentina. — A Ph. repente (Cda.) Sacc. stromatibus majoribus, ascis longius pedicellatis sporidiisque crassioribus et magis obtusis recedere et distincta videtur.

142. Phyllachora fluminensis Theiss. et Syd., Ann. Mycol. 13., 1915, 5287 p. 551, Physalospora fluminensis Theiss., Broteria 1914, XII, p. 27, fig. 6 b.— Epiphylla, at totam folii laminam pervadens, utrinque prominula, lenticulariter orbicularis v. ellipsoidea, 250-340 μ alta, usque 450 μ lata, macula brunnescente cincta, ostiolo centrali non papillato minuto, atro-nitens, sparsa; asci cylindracei, octospori, paraphysibus numerosis; sporidiis ovato-ellipsoideis, rotundatis, hyalinis, oblique monostichis, 12 14 \* 8.

Hab. in foliis Solani sp. (Solanaceae), Rio de Janeiro, Brasiliae (THEISSEN).

143. Phyllachora Dombeyae (Syd.) Syd., Ann. Mycol. 13., 1915, p. 532, 5288 Phyralospora Dombeyae H. et P. Syd., l. c. 10., 1912, p. 441.— Peritheciis epiphyllis maculis flavidis indeterminatis insidentibus, ir regulariter aggregatis, immersis, parte superiore prominulis, depresso-globulosis, atris subopacis, phyllachoroideis, 100-130 μ diam., minute papillatis; ascis clavatis, apice plerumque rotundatis, 50-75 × 15-20, octosporis, indistincte paraphysatis; sporidiis di-tristichis inaequilateris v. lenissime falcatulo-curvatis, continuis, sed plasmate distincte bipartito, utrinque leniter attenuatis, sed apicibus obtusulis, hyalinis, 25-35 × 3-4,5; pycnidiosporis simul praesentibus filiformibus, varie curvatis, saepe uncinatis, continuis, hyalinis, 18-26 × 1-1,5.

Hab. in foliis vivis Dombeyae rotundifolias (Stereuliaceae), Equeefa, Natal, Africa austr. (C. Fuller).

144. Phyllachora? Guazumae P. Henn., Hedw. vol. 48 (1908) p. 7; Theiss. 5289 et Syd., Ann. Mycol. 13., 1915, p. 532. — Maculis rufo-fuscidulis, rotundatis vel effusis; stromatibus epiphyllis, sparsis, rotundato-pulvinatis, atris, plurilocularibus ostiolatis; ascis clavatis, obtusis, octosporis, paraphysatis, 70-75 × 7-8; sporidiis oblique monostichis, ellipsoideis, ? hyalinis, immaturis.

Hab. in foliis Guazumae ul mifoliae (Sterculiaceae), Iponema, Pedro Santa, S. Paulo, Brasiliae.

145. Phyllachora Pterospermi Syd., Ann. Mycol. 15., 1917, p. 226. — Stromata epiphylla, maculis orbicularibus <sup>1</sup>/<sub>2</sub>-1 cm. diam. flavidulis immarginatis plerumque circulariter insidentia <sup>3</sup>/<sub>4</sub>-1 mm. diam., atromitentia, plerumque unilocularia, rarius paucilocularia convexa, cly-

peo crasso aterrimo; asci ovales vel oblongi, paraphysati, 50-65 × 18 25, octospori; sporae ovato-ellipsoideae, continuae, late rotundatae, hyalinae, 15-20 × 9-11.

Hab. in foliis Pterospermi diversifolii (Sterculia-ceae), Los Baños, Laguna, ins. Philipp. (C. F. BAKER).

146. Phyllachora transiens Syd. et Butl., Ann. Mycol.IX, 1911, p.397.— 5291
Stromatibus hypophyllis, maculis flavidis orbicularibus vix limitatis insidentibus, minutis, 0,5·1 mm. diam., in greges rotundatos
3-5 mm. latos plerumque dispositis, 1-vel confluendo paucilocularibus, atris, leniter prominulis, opacis; ascis cylindraceo-clavatis
v. fusoideis, octosporis, breviter stipitatis, 50-70 × 10-11; sporidiis
distichis, oblongis, hyalinis, continuis, 20-22 × 5-7.

Hab. in foliis Euryae acuminatae (Theaceae), Kumaon, Hymalaya, Indiae or. (INAYAT).

147. Phyllachora permixta Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, 5292 p. 397. — Stromatibus innatis, amphigenis, maculis decoloratis indeterminatis plerumque insidentibus, in greges orbiculares v. irregulares 2-10 mm. latos plus minusve dense confertis, minutissimis, punctiformibus, plerumque 1-locularibus, majoribus subinde paucilocularibus, atris; ascis clavato-cylindraceis, 60-80 × 14-17, octosporis; sporidiis late ellipsoideis, utrinque rotundatis, continuis, hyalinis, monostichis, 12-16 × 6-8.

Hab. in foliis Schimae Wallichii (Theaceae), Maymyo, Burma, Indiae or. (E. J. BUTLER).

148. Phyllachora clypeata Theiss. et Syd., Ann. Mycol. 13., 1915, p. 5293 529, Physalospora clypeata Theiss. Broteria, XII (1914) p. 27.— Stromatibus epiphyllis, amphigenis, irregulariter sparsis v. compluribus in maculis rotundatis approximatis, in epiphyllo 0,5-0,8 mm. latis prominentibus, nitide nigris, in hypophyllo minoribus 0,3-0,4 mm., opacis, unilocularibus; loculis folium percurrentibus, depresse ellipsoideis, 340-420 μ latis 200-270 μ altis, supra et infra clypeo epidermoidali limitatis; parietibus lateralibus brunneis distinctis sed tenuioribus mollioribusque quam stromate clypeali; ascis e cylindraceo-clavatis usque ventricosis, copiose paraphysatis, 75-90 × 18-20; sporidiis monostichis v. distichis, ellipsoideo-elongatis, hyalinis, unilocularibus, utrinque rotundatis, 16-20 × 8.

Hab. in foliis Tiliaceae eujusdam, Sao Leopoldo, Rio Grande do Sul. Brasilia.

149. Phyllachora Premnae H. et P. Sydow, Ann. Mycol. XII, 1914, p. 5294
564. — Stromatibus epiphyllis, innatis, sed in hypophyllo non vi-

sibilibus, sparsis vel compluribus irregulariter aggregatis, quoad formam et magnitudinem valde variabilibus, 1-4 mm. diam, saepe confluentibus, leniter convexulis, superficie ob ostiola leniter prominentia nitidula rugulosis, intus multilocularibus; stylosporis filiformibus, varie curvatis, saepe falcatis, continuis, hyalinis, 17-24 > 1; ascis immaturis tantum visis.

Hab. in foliis Premnae Cumingianae (Verbenaceae), San Antonio prov. Laguna, Luzon, Ins. Philippin. (M. RAMOS). — Status conidicus tantum descriptum et tunc aegre ad Phyllachoram pertinens. Cnfr. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 575.

150. Phyllachora Ochnae Pat. et Har., Bull. Soc. Mycol. Fr. 28., 1912, 5295 p. 283. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 532.— Maculis amphigenis exaridis, orbicularibus, 6-8 mm. diam., fuscescentibus; stromatibus amphigenis minutis,  $\frac{1}{3}$ -0,5 mm. diam., circulatim fere regulariter dispositis, atris, nitentibus, convexis, loculis paucis (1-2); ascis clavatis,  $60 \times 12$ , octosporis; sporidiis pluriseriatis, hyalinis, elorgatis, rectis, utrinque subattenuatis, intus pluriguttulatis,  $24 \times 5$ .

Hab. in foliis Ochnae sp. (Vitaceae), Ste-Marie-de Madagascar (Boivin), Palawan, Ins. Philipp.

151. Phyllachora congregata Theiss. et Syd., Ann. Mycol. 13., 1915 5296 p. 520. — Stromatibus hypophyllis, maculis nullis, minutis, punctiformibus, hinc inde gregariis dein confluentibusque, opace nigris, plerumque unilocularibus; clypeo epidermoidali 25-30 μ cr.; loculo late piriformi dimidium crassitudinis foliorum attingenti, 200-280 μ diam.; ascis cylindraceo-clavatis, paraphysatis, 70-90 × 12-15, octosporis; sporidiis monostichis v. distichis, oblongis, utrinque parum angustatis apice rotundatis, unilocularibus, hyalinis, 15-18 × 5-6; loculis conidialibus parvis globosis 100-120 μ diam.; conidiis filiformibus, curvatis, unilocularibus, hyalinis, 12-14 × 0,75.

Hab. in foliis Vochysiae ellipticae (Vochysiaceae), Brasilia (SELLO).

152. Phyllachora Gnipae F. L. Stevens et N. Dalby, Bot. Gazette 68., 5297 1919, p. 56, tab. fig. 27, 28 — Maculis numerosis 0,5-1,5 cm. diam., stromata irregulariter circumdantibus, utrinque brunneis vetustate albicantibus; stromatibus irregulariter rotundatis v. angulosis, 2-5 mm. diam., supra nitide nigris infra pallidioribus, ob perithecia rugulosis; clypeo utrinque 30 μ circ. cr., loculis latiore; loculis numerosis magnitudine variabilibus e 190 × 95 usque ad 380 × 190, in mesophyllo innatis; stromatibus loculos parum evolutos circumdantibus; ascis cylindraceis octosporis; sporidiis oblongis, hyalinis,

continuis, guttulatis et granulosis, obtusis, 18-20 > 6-7.

Hab. in foliis Gnipae americanae (?), El Gigante, Porto Rico.

153. Phyllachora infesta Theiss. et Syd., Ann. Mycol. 13., 1915, p. 562.— 529 Stromatibus arcte confertis 400-500  $\mu$  latis in maculis 2-3 mm. latis irregulariter rotundatis; stromatibus in utraque pagina conspicientibus, medio conoideo-elevatis, nitidis, margine depressis, opacis, subconfluentibus; loculis singulis folium percurrentibus, depresse globosis 270-330  $\mu$  latis 200-220  $\mu$  altis, supra et infra clypeo epidermoidali nigro 17-20  $\mu$  cr. tectis; loculis parietibus stromaticis propriis destitutis et in mesophyllo immersis; ascis paraphysatis, cylindraceis, octosporis, 65-80  $\times$  10-14; sporidiis monostichis, v. distichis, elongatis, hyalinis, unilocularibus, utrinque rotundatis, rectis, 12-13  $\times$  5-5,5.

Hab. in foliis ignotis, Congo, Africa (VANDERYST).

PHYLLACHORELLA Syd., Ann. Mycol. 12., 1914, p. 489. — Stroma Phyllachorae. Asci aparaphysati. Sporidia continua, hyalina.

Phyllachorella Micheliae Syd., l. c. — Stromatibus hypophyllis, in 5299 epiphyllo maculas leniter depressas efficientibus, sparsis, rotundatis, 1-4 mm. diam., ca. 200 μ altis, pro ratione parum immersis, matricem elevantibus, atris; loculis dense stipatis, globosis, 140-170 μ diam.; ascis clavatis, apice rotundatis, breviter stipitatis, 55-75 × 18-22, octosporis, aparaphysatis; sporidiis distichis, ovato-oblongis, medio saepe contractis, continuis, hyalinis, 16-18 × 8-9.

Hab. in foliis Micheliae niligiricae (? Magnoliaceae), Ootacamud, Niligiris Madras Pres., Indiae or. (W. MAC RAE).

2. Phyllachorella oceanica Ferdinandsen et Winge, Mycologia 12., 1920, 5300 p. 103, cum icon. — Stromatibus matrici tumefactae insidentibus, strato corticali innatis, nunc unilocularibus punctiformibus, nunc crustas moriformi-tuberculatas, usque ad 1 cm. latas formantibus, atris; loculis in tuberculo singulo stromatis pluribus immersis, fere globosis, 500-800 μ diam., supreme strato nigrefacto crasso, quod saepius inter loculos plus minusve prorepit eosque interdum cingit, tectiε; stratis subjacentibus matricis hyphis fungi intertextis. Ascis late ellipsoideis, plerumque 55-77 × 24-32, sessilibus; paraphysibus nullis; sporidiis octonis, distichis, continuis, hyalinis, multiguttulatis, plurimis, 20-30 × 10-13, forma (\* secundum aetatem) valde varia; saepius ellipsoideis utrinque late rotundatis vel truncatis, rarius fusiformibus, apicula recta v. subcurvata praeditis.

Hab. in thalio duabus specierum Sargassi (Algae) (a O Winge descriptae), Lat. 32°.21' N, long. 45°.20' W (C. H. OSTENFELD).

- PUIGGARINA Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 123 (Etym. a Cl. J. Puiggari). Stromata biophila phyllogena innata unilocularia astoma v. obsolete ostiolata atra coriacea; asci octospori; sporae unicellulares hyalinae. Est Phyllachora stromatibus unilocularibus praedita multae species ad gen. Phyllachoram v. etiam Physalosporam, et Trabutiam huc pertinent.
- 1. Puiggarina microtheles Spegaz., l. c., Extr. p. 125 cum icon.— Ma-5301 culae nullae v. parvae indeterminatae amphigenae 1-3 mm. diam.; stromata epiphylla sparsa v. 2-3 laxe gregaria minuta innata sublenticularia 120-200 mm. diam. nigra nitentiuscula, minute ostiolata; asci cylindracei breviter crasseque pedicellati parce paraphysati 60 × 8-10; sporae elliptico-subfusoideae utrinque acutiusculae, hyainae, continuae, 12-14 × 5-6.

Hab. ad folia Trichoclines nutantis (Compositae), prope Apiahy Brasilia (J. PUIGGARI).

2. Puiggarina myiocoproides Spegaz., l. c., Extr. p. 126.— Hypophylla, 5302 gregaria, maculis destituta, innato-superficialia pusilla nigra subnitidula, semper 1-locularia 150-200 μ diam., obsolete ostiolata, coriaceo-subcarbonacea, contextu atro indistincto; asci subcylindracei, superne rotundati deorsum breviter cuneato-attenuati, paraphysati octospori, 60-70 × 6-7; sporae oblique monostichae, e cylindraceo subclipticae saepius leniter naviculares, utrinque obtusae, grosse 2-guttulatae, laeves, hyalinae, 8-10 × 4.

Hab. ad folia viva, Dalbergiae? (Leguminosae), prope Villarica, America austr. trop. (B. BALANSA).

3. Puiggarina costaricensis Spegaz., Fungi Costaric. nonn., in Bol. 5303
Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 204 cum icon. —
Stromata saepius hypophylla, solitaria v. laxe 2-3-gregaria, non maculifera, innato-prominula convexulo-lenticularia, 200-250 μ diam., ostiolata, atra carbonacea laevia non v. vix nitidula; loculi solitarii, nucleo albido farcti; asci quandoque clavati, 90-100 × 10-20, sporis eorum dimidio supero conglobatis, dimidio infero longe attenuato-pedicelliformi, quandoque cylindracei, sporis per tota longitudine oblique monostichis, apice obtusissime rotundati; sporae ex elliptico subglobosae, laeves, nubilosae, hyalinae, 14 × 10-11.

Hab. in foliis vivis Buettneriae carthagenensis

(Sterculiaceae), ad rivum Maria Aguilar et circa San Jose, Costarica, America trop.

## Sect. 2. Phaeosporae

- PHAEOCHORA v Höhn., Fragm. z. Mykol. IX, 1909, p. 444. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 401. Est Catacauma aparaphysata, sporidiis brunneis continuis donata. Typ. gen.:
- 1. Phaeochora Chamaeropis (Cooke) v. Höhn., l. c., Auerswaldia Cha-5304 maeropis (Cooke) Sacc., Syll. II, p. 626. Etc.
- PHAECHORELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 405. Est Catacauma paraphysata, sporidiis brunneis unilocularibus donata. Typ. gen.:
- 1. Phaeochorella Parinarii (P. Henn.) Th. et Syd., l. c., Cocconia Pari- 5305 narii P. Henn., Syll. XVIII p. 159.
- 2. Phaeochorella clypeata (Wint.) Th. et Syd., l. c., Auerswaldia cly-5306 peata Wint., Syll. IX p. 1032.
- PHAEOTRABUTIELLA Theiss, et Syd., Ann. Mycol. 13., 1915, p. 360.— Est Trabuticla phaeospora et paraphysibus destituta.— Typ. gen.:
- 1. Phaeotrabutiella perisporioides (Sacc.) Theiss. et Syd., 1. c., Phylla-5807 chora perisporioides Sacc., Syll. XI p. 373.

## Sect. 3. Hyalodidymae

- MUNKIODOTHIS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 360.— Est *Trabutia* sporidiis hyalinis inaequaliter septatis donata, paraphysibus praesentibus. Typ. gen:
- 1. Munkiodothis melastomata (v. Höhn.) Theiss. et Syd., Munkiella me- 5308 lastomata v. Höhn., Syll. XXII p. 434.
- OMPHALOSPORA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 361. —
   Stromata subcuticularia, loculi prominentes. Paraphyses praesentes.
   Sporidia inaequaliter bilocularia, hyalina. Typ: generis:
- 1. Omphalospora Stellariae (Lib.) Th. et Syd., l. c., Dothidella Stellariae 5309 (Lib.) Lind., Syll. XXII p. 432.
- 2. Omphaiospora ambiens (Lib.) Th. et Syd., l. c., cum icon, Euryachora 5310 ambiens (Lib.) Fuck., Syll. I p. 660 (descriptio nulla). Stromatibus ut in Omph. Stellariae; hyphis subepidermicis reticulatim di-

spositis; loculis 50-55  $\mu$  cr. epidermidem elevatam reddentibus; ascis caespitosis, basilaribus, aparaphysatis, irregulariter elavatis, 26-32  $\times$  10-14, octosporis; sporidiis 2-3-seriatis, elongatis, leniter elavatis, hyalinis, utrinque rotundatis, 7-10  $\times$  2,5-3, locu o inferiori 2-3  $\mu$ .

Hab. in caulibus vetustis Stellariae nemorum (Cariophyllaceae), Germania.

- REHMIODOTHIS Theiss. et Syd., Ann. Mycol. 12., 1914, p. 192; 13., 1915, p. 363. Est *Trabutia* sporidiis hyalinis aequalibus donata; paraphyses praesentes. Typ. gen.:
- 1. Rehmiodothis Osbeckiae (B. et Br.) Th. et Syd., l. c., Dothidella Osbe-5311 ckiae (B. et Br.) Sacc., Syll. II p. 633.
- 2. Rehmiodothis dothideoides (Speg.) Th. et Syd., 1. c., Clypeolum dothi- 5312 deoides Speg., Syll. IX p. 1061.
- 3. Rehmiodothis myrtincola (Rehm.) Th. et Syd., l. c., Dothidella myr- 5313 tincola Rehm, Syll. XI p. 375.
- ANISOCHORA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 406. Est Catacauma, paraphysata, sporidiis hyalodidymis loculis inaequalibus donata. Typ. gen.:
- 1. Anisochora topographica (Speg.) Theiss. et Syd., l. c., Munkiella to-5314 pographica Speg., Syll. IX p. 1035.
- PLACOSTROMA Theiss. et Syd., Ann. Mycol. 12., 1914, p. 269; 13., 1915, p. 407. Est Catacauma paraphysata, sporidiis hyalodidymis, loculis aequalibus donata.
- 1. Placostroma Pterocarpi (Mass.) Th. et Syd., l. c. Dothidella Pterocarpi 5315

  Massee, Bull. Bot. Garden Kew, 1912, p. 357, fig. 5, 6, 9, 10 Syn.

  Phyllachora Pterocarpi Rehm, Ascom. Philipp. in Philipp. Journ.

  of Sci. VIII, 1913, p. 397. Maculis hinc inde sparsis, orbicularibus vel difformibus, determinatis, arescenti-fuscis, zona obscura cinctis; stromatibus in centro macularum laxe aggregatis, matrici innatis, tumidulis, atris, nitentibus, subcarbonaceis, 1 mm. circ. latis; ascis subcylindraceis, apice incrassato-rotundatis, basi modice attenuatis, pedicellatis, octosporis; sporidiis oblique monostichis, ellipsoideis, hyalinis, medio septatis, non constrictis, 15-18 × 7-8.

Hab. in foliis vivis Pterocarpi indici (Leguminosae), Kuala Lumpur, Malaya. — Nonnullis aliis speciebus jam editis ad hoc nov. gen. pertinent, de quibus cnfr. Th. et Syd. in l. c.

SCIRRHODOTHIS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 415. — Est Scirrhia paraphysibus donata.

1. Scirrhodothis Cyperi (Wakef.) Trott., Scirrhia Cyperi Wakefield in 5316 Bull. Bot. Gard. Kew 1914, p. 158. — Stromatibus gregariis, oblongis, epidermide diu tectis, dein erumpentibus, atris, 1-4 mm. longis, ostiolis prominentibus; peritheciis in seriem linearem unicam vel duplam dispositis, 200 μ usque diam.; ascis clavatis, 65-75 × 8-9, octosporis; paraphysibus filiformibus; sporidiis subdistichis, hyalinis, fusoideis, subcurvulis, primo guttulatis dein 1-septatis, ad septa non vel vix constrictis, 17-18 × 4.

Hab. in caulibus foliisque Cyperi polystachyi (Cyperaceae), Nudgee, Queensland (C. F. White).

2. Scirrhodothis seriata (Syd. et Butl.) Th. et Syd., Ann. Mycol. 13., 5317 1915, p. 416, Scirrhia seriata Syd. et Butl., Ann. Mycol. IX, 1911, p. 402. — Stromatibus epiphyllis, amoene longitrorsum seriatis, erumpentibus, atro-brunneis, oblongis, 1-2 mm. long. ca. 1/1/3 mm. latis, matrice fissa cinctis, intus minute plurilocularibus; ascis clavatis, 48-66 × 11-15, octosporis; paraphysibus sparsis, septatis, filiformibus; sporidiis distichis, fusoideis, utrinque leniter attenuatis, medio 1 septatis et constrictis, hyalinis, 20-22 × 5,5-6,5.

Hab. in foliis B a m b u s a e sp. (Graminaceae), Moulmein Burma, Indiae or. (E. J. Butler).— A S. bambusina Penz. et Sacc. et S. luzonenzis P. Henn. diversa.

3. Scirrhodothis Bambusae (Turc.) Trott., Scirrhia Bambusae Turconi 5318 in Rendic, Acc. Lincei, di Sc., ser. 5., XXV, 1°, p. 531 (1916) et in Atti Ist. Bot. Pavia XVI (1916) p. 251, tab. XVIII. - Stromatibus ellipsoideo-elongatis, sublinearibus, 1-2 mm. longis, 0,5-1 mm. latis, gregariis, quandoque longitrorsum seriatis, tectis dein rimose erumpentibus, atris; loculis in quoque stromate numerosis, plerumque 2-3-seriatis, subglobosis vel ovatis, 180-200 μ diam., cum stromatis substantia continuis vel vix discretis, ostiolis parum perspicuis vel brevissime prominulo-papillatis; ascis cylindraceo-clavatis, superne obtuse rotundatis, inferne subattenuatis ac breve crasseque stipitatis, paraphysibus filiformibus guttulatis obvallatis, octosporis; sporidiis distichis vel oblique monostichis, oblongo-clavatis, deorsum attenuatis ac plus minusve curvatis, prope basim distincte 1-septatis, ad septum non vel leniter constrictis, granulosis, guttulatis, hyalinis 20-24 × 8-12. Status conidicus Melanconium Bambusae Turc., quod confer.

Hab. in culmis ramulisque Bambusae mitis, nigrae,

gracilis, ques vexat, in horte bet. Ticinensi, Papiae, Ital. ber.

- APIOSPORA Sacc. Syll. I p. 539, IX p. 659, XI p. 301, XIV p. 534, XVI p. 477, XVII p. 658, XXII p. 160. Theiss. et Syd., Ann Mycol. 13., 1915, p. 419.
- 1. Apiospora indica Theiss. et Syd., Ann. Mycol. 13., 1915, p. 420.—5319 Stromatibus 1-1,5 mm. long 180-240  $\mu$  lat., rimula anguste lineari dehiscentibus; peritheciis seu loculis minutis, depresse globosis 110-120  $\mu$  lat., 80-90  $\mu$  altis; ascis clavatis aparaphysatis, 75-100  $\times$  18-24; sporidiis oblique 1-2-stichis, rectis curvulisve, subclavatis, hyalinis, 22-27  $\mu$  long., superne 7-9  $\mu$  cr. cellula inf 5-10  $\mu$  longa, ad septum non v. vix constrictis.

Hab. in foliis B ambusae sp. (Graminaceae), Wynaad, Ind. orient. (BUTLER). — Ap. Montagner affinis.

2. Apiospora carbonacea Rehm, Ascom. Philippin. VIII. in Leafit. of 5320 Philippin. Bot. VIII, 1916, p. 2945. — Perithecia gregaria, cortici innata, mox denudata ab eaque ad basim marginata, e lata basi conoidea, breviter papillulata, glabra, atra, carbonacea, 1-1,2 mm. lata, 1 mm. alta; asci cylindracei, 130-12,8-spori-I; sporae cylindraceae, utrinque rotundatae, rectae, hyalinae, inaequaliter 2-cellulares, ad septum non constrictae, cellula superiore 17 μ inferiore 10 μ longa 5 μ lata, hyalinae, distichae, paraphyses filiformes creberrimae 1-2 μ latae.

Hab. ad Schizostach y u m (Graminaceae) emortuum in cacumine Mt. Maquiling, Ins. Philipp. (C. F. BAKER).— Ab Apiospora imprimis peritheciis magnis carbonaceis recedit.

3. Apiospora Rubi-fruticosi Severini, Ann. di Botanica v. XI, an. 1913, 5321 p. 195. — Peritheciis laxe gregariis seriatis, tectis, globosis, peridermio pustulato innatis, atris, nitidis, brevissime papillulatis, 0,3-0,5 mm. diam.; ascis cylindraceis, subsessilibus, paraphysatis, 140-150 × 9-9,5, octosporis; sporidiis oblique monostichis v. distichis piriformibus, rectis v. curvulis utrinque acutiusculis, hyalinis, 30-35 × 6-7, prope basim uniseptatis, ad septum vix constrictis, loculo inferiore circiter 9 μ longo.

Hab. in sarmentis Rubi fruticosi (Rosaceae), in silva S. Dominici (Perusia), Italiae Centr.

STIGMOCHORA Theiss. et Syd, Ann. Mycol. 13., 1915, p 580.— Loculi mesophyllo immersi, discreti v. pauci aggregati, clypeo epidermali tecti. Asci paraphysati, octospori. Sporidia hyalina uniseptata, loculo inferiore minuto. - Typ. gen.:

Stigmochora controversa (Starb.) Th. et Syd., l. c., Apiospora controversa Starb., Syll. XXII p. 161, Dothidella controversa (Starb.)
 Speg. — Myc. Argent. VI, in Anal. Mus. Nac. Buenos Aires XXIII (1912) p. 95 — Dothidella? platyasca Speg. — Syll. XXII, p. 432.—
 Phyllachora timbo Rebm — Syll. XIV p. 669.

Hab. in foliis vivis Pithecolobii scalaris (Leguminosae), S. Lorenzo, Argentina. — Cnfr. Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 560 et 580; tab. IV fig. 2.3, V fig. 7.

2. Stigmochora Ulei Syd., Ann. Mycol. 14., 1916, p. 84. — Stromatibus 5323 epiphyllis, per superficiem foliorum ex toto vel per magnam partem fuscidule decoloratorum plus minus aequaliter distributis, orbicularibus, 350-400  $\mu$  diam., atris, nitidis, conice convexis, unilocularibus; loculis lenticularibus vel applanato-globosis, 200-320  $\mu$  latis, 120-160  $\mu$  altis, pariete laterali tenui basali parum crassiore, 6-10  $\mu$  crasso; clypeo epidermali, 30-40  $\mu$  crasso, opaco; ascis fusoideoclavatis, mucose paraphysatis, 55-70  $\times$  12-17, octosporis; sporidiis 2-3-stichis, oblongis, rectis vel leniter inaequilateris, hyalinis, utrinque lenissime attenuatis, sed apicibus obtusis, totis 18-20  $\times$  5,5-7, loculo infero 4-5  $\mu$  tantum longo et lato, haud constrictis.

Hab. in foliis Pithecolobii lindsaeifolii, Manaos, Rio Negro, Brasilia (E. ULE).

- COCCOCHORELLA v Höhn., Fragm. z. Mykol. X, 1910, n. 500. Theissen et Sydow, Ann. Mycol. 13., 1915, p. 581. Stroma totam crassitudinem folii occupans et tunc utrinque visibile, clypeo epidermico tecto, pluriloculare. Asci paraphysati, octospori. Sporidia bilocularia loculo super majori brunneo, inferiori papilliformi hyalino. Typ. gen.:
- Coccochorella quercicola (P. Henn.) v. Höhn., Auerswaldia quercicola 5324
   P. Henn., Syll. XVII p. 843.
- ENDODOTHELLA Theiss. et Syd., Ann. Mycol., 1915, p. 582.— Stroma ut in *Phyllacho a*, paraphyses praesentes; sporidia hyalina bilocularia.
- Endodothella Liteaae Racib. in Theiss. et Syd., Ann. Mycol. 13., 5325
   1915, p. 588, tab. IV fig. 10. Stromatibus irregulariter sparsis, ovoideis v rotundatis 1-2 mm. latis nigris, supra nitidis et depresse convexis, zona viridi-flava usque 2 mm. lata circumdatis, loculis 5-12 in quoque stromate, raro rotundatis plerumque e mutua pres-

sione angulosis, ostiolo rotundato parum distincto praeditis, parietibus parum distinctis limitatis; paraphysibus filiformibus collabescentibus; ascis late cylindraceis, rectis, apice rotundatis, 110-130  $\approx 20\text{-}24$ , octosporis; sporidiis monostichis, ovoideis, utrinque rotundatis, 20-23  $\approx 8\text{-}10$ , bilocularibus, crasse tunicatis, medio non constrictis, loculis inaequilongis, uno 12-15  $\mu$  longo, altero 6-8  $\mu$ , tunica hyalina v. subgriseola praeditis.

Hab. in foliis Litseae javanicae (Lauraceae), Gedah in ins. Java (RACIBORSKI).

2 Endodothella dispar (Syd.) Syd. in Theiss, et Syd., Ann. Mycol. 13., 5326 1915, p. 584, Dothidella dispar Syd. in Syd. et Butl., Ann. Mycol. IX, 1911, p. 401. — Stromatibus amphigenis, innatis, utrinque visibilibus, sparsis, rotundatis usque oblongis, minutis, 1/5 3/4 mm. longis, atris, planis; loculis minutis, paueis; ascis cylindraceis v. clavato-cylindraceis, subsessilibus, octosporis, 45-55 × 9-13, aparaphysatis (?); sporidiis distichis, fusoideis, distincte I septatis, haud constrictis, 11-14 × 4, loculis inaequalibus, superiore majore ca. 9 μ longo, inferiore 4-5 μ longo.

Hab. in foliis Andropogonis contorti (Graminaceae), Tellicherry Malabar, Indiae or. (E. J. BUTLER).

3. Endodothella Bambusae (Rabh.) Theiss et Syd., Ann. Mycol. 13., 5327 1915, p. 585, Physalospora Bambusae (Rabh.) Sacc., Syll. I p. 446.— Syn. Dothidella bambusicola Syd. et Butl., Ann. Mycol. IX, 1911, p. 401.

Hab. in foliis Bambusae sp. (Graminaceae), Moulmein Burma. Indiae or. (E. J. BUTLER).

4. Endodothella Albizziae (Syd.) Syd. in Theiss. et Syd., Ann. Mycol. 5328 13., 1915, p. 590, Dothidella Albizziae Syd., Enum. Philipp. Fungi I, in Philipp. Journ. of Sci. VIII (1913) p. 280. — Stromatibus epiphyllis, sparsis, rotundatis, minutissimis, 0,2-0,5 mm. diam., atris, intus plerumque 1-locularibus, raro 2-locularibus; ascis clavatis, apice rotundatis, 55-75 × 14-19, octosporis; sporidiis oblique monostichis vel distichis, ellipsoideis, utrinone late rotundatis, medio 1-septatis et valde constrictis, primo hyalinis, tandem? dilutissime fuscidulis, 12-16 × 5-6.

Hab. in foliis vivis Albizziae marginatae (Leguminosae), Luzon, Prov. Nueva Ecija, ins. Philipp.

Endodothella Rickii Theiss. et Syd. Ann. Mycol. 14., 1916, p. 449.— 5829 Stromatibus amphigenis, 0,5-1 cm. lat. subrotundis v. irregularibus, minutis, 0,5-1 mm. lat., confluendo amplioribus, saepe nervi-

sequiis nitidulis, 1-paucilocularibus; clypeo amphigeno 20-30  $\mu$  cr. opaco; loculis saepe toto folio immersis, 175-300  $\approx$  120-200, pariete atro brunneo 12-14  $\mu$  crasso; ascis paraphysatis, tereti-clavatis, breviter stipitatis, octosporis, 65-80  $\approx$  15-18; sporidiis oblique monostichis v. distichis, oblongis v. fusoideis, hyalinis, pro parte 1-locularibus et pro parte obsolete bilocularibus, 20-22  $\approx$  5-6.

Hab. in foliis 12-15 ca. long. et 7-8 cm. lat., margine integris et pilosis, Leguminosa e indet., Isola S. Francisco, Brasiliae (Dr. Rick).

6. Endodothella leptosperma Syd., Ann. Mycol. 14., 1916, p 85. — Stromatibus amphigenis, copiose per folium distributis, irregularibus nervulis limitatis, hinc fere semper angulatis, zonula flavidula cinctis atris, nitidulis, 1,5-4 mm. diam.; clypeo epidermali, amphigeno, 12-20 μ crasso, extenso; loculis numerosis in quoque stromate, applanato-globosis, 180-250 μ latis, 160-180 μ altis, totam folii crassitudinem occupantibus, parietibus brunneis ca. 10 μ crassis; ascis paraphysatis, fusoideis, sessilibus, 45-70 × 9-13, octosporis; sporidiis tristichis, angustissime fusoideis, utrinque attenuatis, rectis vel curvatis, medio 1 septatis, 34-38 × 3.

Hab. in foliis Meliaceae (?), Seringal, S. Francisco, Rio Acre, Brasilia (E. Ule).

7. Endodothella Picramniae (Syd.) Syd. in Theiss. et Syd., Ann. Mycol. 5331 13., 1915, p. 590. Dothidella Picramniae H. et P Sydow, Ann. Mycol. XI 1913, p. 266. — Rehm, Ascom. 2073; Sydow, Fungi evot. 134. — Stromatibus in utraque foliorum pagina conspicuis, sparsis orbicularibus, planis, 1-3 mm. diam.; loculis numerosis, minutis, parum prominulis; ascis cylindraceo-clavatis, saepe curvatis, octosporis, 40 55 × 7-10; sporidiis oblique monostichis usque distichis, fusiformibus, utrinque acutis, medio 1-septatis, non constrictis, hyalinis, 14-16 × 3,5-4,5.

Hab. in foliis Picramniae Bonplandianae (Simarubaceae), San Josè, Costa Rica (A. TONDUZ).

OLIGOSTROMA H. et P. Sydow, Ann. Mycol. XII, 1914, p. 265 (Etymoligos paucus et stroma). — Stroma in epidermide situm. Perithecia (vel potius loculi) sub epidermide sita, solitaria, globulosa, immersa, pariete bene evoluto, ostiolo haud typico praesente. Asci aparaphysati. Sporidia hyalina vel subhyalina. — Est quasi Phyllachora hyalodidyma aparaphysata.

1. Oligostroma Proteae Sydow, I. c. p. 265. — Stromate amphigeno, pla- 5332

gulas atras irregulares subinde confluentes 1-5 mm. longas planiusculas efficiente, in epidermide sito, atro; loculis peritheciiformibus solitarie sub epidermide sitis, omnino immersis, sed haud folium penetrantibus, globosis vel ovato-globosis, 100-120  $\mu$  diam., pariete bene evoluto, ostiolo haud typico; ascis sessilibus, cylindraceo-clavatis vel clavatis, apice rotundatis, 75-100  $\times$  16-20, aparaphysatis, 4-6-sporis; sporidiis oblique monostichis usque distichis, oblongo-cuneatis, supra medium 1-septatis, non constrictis, totis 24-28  $\mu$  longis, loculo superiore breviore sed latiore rotundato vel ovato 8-10  $\mu$  longo, 8-9  $\mu$  lato, inferiore longiore sed angustiore 15-19  $\times$  6-8, hyalinis vel subhyalinis.

Hab. in foliis Proteae Flanaganii (Proteaceae), Kentani Natal, Africa austr. (MISS PEGLER).

### Sect. 4. Phaeodidymae

SYMPHAEOPHYMA Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos Aires XXIII (1912) p. 97. — Stromata superficialia, centro papillato-loculigera, ambitu sterilia, fimbriata, atra. Loculi difformes, prominuli, minuti. Asci constipati octospori. Sporidia didyma, fuliginea.

1 Symphaeophyma subtropicale Speg., loc. cit., fig. 91 — Maculis amphigenis, repando-angulosis, 1-5 mm., subcallosis, fuscis; stromatibus hypophyllis, superficialibus, atris, opacis, contextu indistincto, ambitu fimbriatis, ex hyphis repentibus radiantibusque, ramulosis, crebre septulatis, fuligineis; loculis 1-10 gregariis in centro stromatis, prominulis, saepius discretis, difformibus, minutis, 120-180 μ diam., astomis, excipulo atro-carbonaceo, nucleo e hyalino olivascente; ascis clavulatis, breviter pedicellatis, 90 × 20, pulpa subgelatinosa superne olivascente immersis; sporidiis leniter subclavulatis, utrinque obtusissimis, medio 1-septato-constrictis, diu hyalinis serius fuligineis, 25-28 × 11-12, loculis subaequalibus, grosse 1-guttulatis

Hab. in foliis vivis Lucumae neriifoliae (Sapotaceae), prope Bompland, Argentina.

COCCOCHORA v. Höhn., Fragm. z. Mykol. IX, 1909, n. 444, X n. 500.— Theiss. et Syd., Ann. Mycol. 13., 1915, p. 368.— Est *Trabutia* paraphysibus donata, sporidiis phaeodidymis.— Typ. gen.:

Coccochora Kusanoi (P. Henn.) v. Höhn., l. c., Dothidella Kusanoi 5334
 P. Henn., Syll. XVII p. 850.

2. Coccochora Rubi Davis, Parasits Fungi Wisconsin, V, Trans. Wisc. 5335 Ac. of Sc. etc. XIX, 1919, P. II, p. 696. — Stromatibus epiphyllis sparsis, nigris, nitidis, prominentibus, suborbicularibus, subcuticularibus 0,25-1 mm. diam.; loculis 1 ·v. plurimis 40-60 μ altis 60-90 μ latis, apice dehiscentibus; ascis cylindraceis plus v minus curvis, 45-50 × 7 9, octosporis; sporis brunneis, oblongo-clavatis, sub medie septatis, non constrictis, 11-15 × 4-6; paraphysibus filiformibus inconspicuis.

Hab. in foliis Rubi hispidi (Rosaceae), Millston, Wisconsin, Amer. boreali.

- THYRIOPSIS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 369 Stroma subcuticulare, tectum, supra carbonaceum, intus totum molliusculum laeticolor fibrosum, hypothecio homogeno; loculis immersis; ascis aparaphysatis octosporis; sporidiis phaeodidymis. Typ. gen.:
- Thyriopsis halepensis (Cooke) Theiss. et Syd., l. c. p. 369, Dothidea 5336 halepensis Cooke, Syll. II p. 642. Huc ducendum est Dothiclypeolum pinastri v Höhn. nov. gen. et sp. in Jaap « Fungi sel. exsicc. » n. 742, an. 1915; Verh. bot. Ver. Prov. Brandb. 59., 1917, p. 29. Cnfr. Theissen et Sydow, Ann. Mycol. 15., 1917, p. 433.
- PHAEODOTHIOPSIS Theiss. et Syd., Ann. Mycol. 12., 1914, p. 192; 13., 1915, p. 410. Stroma inter epidermidem et mesophyllum positum, clypeo epidermali tectum. Typ. gen.:
- 1. Phaeodothiopsis Zollingeri (Mont. et Berk.) Th. et Syd., I. c., Dothi- 5337 della Zollingeri (Mont. et Berk.) Sacc., Syll. II, p. 632.— Etc.
- 2. Phaeodothiopsis Eupatorii F. L. Stevens, Bot. Gazette 69., 1920, p. 5338 252, tab. XIV fig. 16·17.— Maculis clypeum non excedentibus; stromatibus numerosis, rotundatis, 1·4 mm. diain., nigris ob perithecia rugosis, plerumque epiphyllis, primum epidermicis demum subepidermicis et in mesophyllo evolutis; loculis rotundatis v. lenticularibus 100·250 μ diam., 80 μ altis; ascis cylindraceis circ. 110 ≈ 17, octosporis, inordinatis; sporidiis uniseptatis, loculis inaequalibus, maturitate brunneis, 20 ≈ 7; paraphysibus filiformibus ramosis.

Hab. in foliis Enpatorii portoricensis (Compositae). Dos Bocas prope Utuada, Porto Rico.

3. Phaeodothiopsis Stryphnodendri (P. Henn.) Th. et Syd., l. c., Dothidea 5339 Stryphnodendri P Henn., Hedw. vol. 48. (1908) p. 9.—Stromatibus epiphyllis, erumpenti-superficialibus, gregariis, pulvinatis, rugulosis, atro-carbonaceis, 0.5-1 mm. diam.; loculis immersis, globulosis, fu-

scis, obtuso-ostiolatis; ascis cylindraceis, vertice obtuse rotundatis, octosporis, 45-55 \* 4-6; sporidiis oblique monostichis, ellipsoideis, utrinque rotundatis, medio 1-septatis, constrictis, fuscis, 9-10 \* 4-5.

Hab. in foliis Stryphnodendri Barbatiani (Leguminosae), Morro Pellado, S. Paulo, Brasilia.

4. Phaeodothiopsis Pterocarpi H. S. Jates, F. from Brit. N. Borneo, in 5340 Philipp. Journ. of Sc. Bot. v. 13., 1918, p. 237. - Stromatibus epiphyllis, numerosis ca. 0,5-1,5 mm. diam., dispersis, carbonaceis, hemisphaerico-pulvinatis, laevibus, atris, in maculis fuscidulis, 2-3 mm diam. dispositis; loculis ca. 6-12, 80-120  $\mu$  diam., globosis; ascis cylindraceis, 50-60  $\times$  10, 8-sporis, paraphysatis; sporidiis distichis oblongis, utrinque rotundatis, brunneis, ad basim 1-septatoconstrictis, cellula superiore 10  $\times$  12,5 inferiore 3-4  $\times$  3.

Hab. in foliis Pterocarpi indici (Leguminosae), Tenom, in ins. Borneo bor. — Socia Meliola Pterocarpiae Yat.

#### PHAEODOTHIS Syd. - Syll. XVII p. 854, XXII p. 436.

Phaeodothis Gigantochloae Rehm, Ascomyc. Philipp. V, Leaflets of 5341
 Philipp. Botany, VI (1914) p. 2223. — Stromatibus culmo innatis, convexis, orbicularibus vel ellipsoideis, 1-3 mm. longis, 1,5 latis, 1 mm. altis, extus fusco-inquinatis, intus fulvo-rubidulis, papillulis nullis conspicuis; loculis 6-8, monostichis, globulosis, 100 μ diam., arcte congregatis, tenuissime membranaceo-contextis; ascis ellipsoideis, demum cylindraceis, octosporis, aparaphysatis; sporidis distichis, fusiformibus, utrinque acutatis, medio septatis constrictisque, subfuscis, 15-18 × 5-6.

Hab. in culmo G i g a n t o c h l o a e emortuo (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER). — Sec. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 185 et p. 598 ad Sphaeriaceas pertinet et potius ut syn. Rhopographi hysterioidis (Ces.) Sacc. et Didymosphaeriae striatulae Penz. et Sacc. habendum.

2. Phaeodothis Tristachyae P. et H. Syd., Ann. Mycol. X, 1912, p. 41. — 5842 Stromatibus amphigenis, sparsis v. paucis seriatis, oblongis v. linearibus, 0,5-1 mm. long., planis, atris, opacis, innatis; loculis numerosis, minutis, 100 150 μ diam.; ascis cylindraceis, apice obtusiusculis, 45-70 × 6-12, octosporis, paraphysibus numerosis filiformibus obvallatis; sporidiis monostichis usque distichis, fusiformibus, medio 1-septatis, non v. parum constrictis, olivaceo-brunneis, 12-13,5 × 3-4, quaque cellula 1-2 guttulata.

Hab. in foliis Tristachyae leucothricis (Gramina-

ceae), Mooi River, Natal (J. B. DAVY). - Phaeod. Tricuspidis Syd. proxima sed differt stromatibus sporidiisque minoribus.

3. Phaeodothis sparsa Petch, Ann R. Bot. Gard. Peradeniya, v.VI, P. III, 5343 1917, p. 227. - Maculis parvis, flavis; stromatibus epiphyllis, saepius solitariis, irregulariter ovalibus, 0,5-0,9 \* 0,3-0,4 mm., pulvinatis, 2-4-locularibus, ostiolis inconspicuis; ascis clavatis, octosporis, parte sporifera 40-60 \* 9-10; sporidiis oblongo-ovoideis, truncatis, inaequaliter uniseptatis, non constrictis, fusco-viridibus, 8-10 \* 4-5; conidiis nigris, lenticularibus, rotundatis vel angulatis 4-5 μ diam.

Hab. in foliis Acaciae caesiae (Leguminosae), Peradeniya, Ceylon.

4. Phaeodothis Apuleiae Speg., Mycet. Argent. VI, Anal. Mus. Nac. Bue- 5344 nos Aires XXIII (1912) p. 95. - Maculis nullis sed foliis ad hypophyllum bulloso-concaviusculis; stromatibus epiphyllis, laxe gregariis, suborbicularibus, 0,5-2 mm. diam., verruculosis, atris, opacis, 3-10-loculigeris; loculis valde prominulis, minutis, subglobosis, 120-150 µ diam., astomis, irregulariter dehiscentibus; ascis e cylindraceo subclavulatis, breviuscule attenuato-pedicellatis, aparaphysatis, 60-70 \* 12-18; sporidiis recte distichis vel oblique monostichis, subobovatis, utrinque subtruncatis, parum infra medium 1septatis, non vel vix constrictis, fuligineis, 11-12 > 6, loculis inaequalibus, superiore longiore, crassiore obtusioreque, grosse 1-guttulatis.

Hab. in foliis vivis Apuleiae praecocis (Leguminosae), prope Bompland, Argentina.

5. Phaeodothis polystoma Sydow, Ann. Mycol. 18., 1920, p. 101. - Stro- 5345 mata epiphylla, maculis brunneolis subtus centro sordide albidis insidentia, orbicularia vel ambitu irregularia, 3-5 mm. diam., atra, parum elevata, superficie ob loculos copiosos dense dispositos undulata, parum nitentia; loculi copiosissimi, 150-200 μ alti, 180-220 μ lati, fere totam folii crassitudinem occupantes, pariete brunneolo ubique evoluto 18-22 μ lato; clypeo tantum epiphyllo 25-30 μ crasso; asci cylindracei, 80-90 \* 11-15, stipitati, octospori, paraphysati; sporae distichae, oblongae, intense olivaceo-fuscae, 1-septafae medio non vel parum constrictae, 18-22 × 3,5-5.

Hab. in foliis Derridis spec. (Leguminosae), Mt. Maquiling, prov. Laguna, Ins. Philippin. (T. Collado).

6. Phaeodothis Grovei Sacc., Notae Mycol. XX, Nuovo Giorn. Bot. it. 5346 23., 1916, p. 223. - Stromatibus epiphyllis, subcircularibus, gre-

gariis, 1,5-3 mm. diam irregulari-subcircularibus, saepe confluentibus, innato-erumpentibus, applanatis, membranaceo-carbonaceis, intus nigris, extus atro-nitentibus, ex loculis prominulis ereberrimis (sub vitro) punetulatis; loculis 40-50 in quoque stromate, globulosis, 40-50 μ diam., subastomis, rarius subumbilicatis; stromatis contextu parenchymatico fuligineo; ascis obovatis, dein breviter oblongis, apice rotundatis, basi obtuse tenuatis, subsessilibus, 35-45-10-14, primo muco obvolutis; sporidiis 2-3-stichis, oblongis, utrin que rotundatis, medio constricto-1-septatis, guttulatis v nubilosis, 14-16 × 6. olivaceis.

Hab. in foliis subvivis Kennedyae sp. (Leguminosae), Australia occid. (communicavit W. B. GEOVE).

7. Phaeodothis cladonema (Wedd.) Theiss. et Syd., Ann. Mycol. 13., 5347-1915, p. 597, Buellia cladonema Weddell, Lich. de Agde, p. 20, Dothidea eladonema (Wedd.) Vonaux, Bull. Soc. Mycol. Fr. 1912, p. 195. — Stromatibus lenticularibus valde applanatis, 0,2-1,2 mm. diam., immersis, saepe confluentibus; pseudoperitheciis ostiolatis 50-100 μ diam.; ascis cylindraceo-elavatis, breviter crasseque pe dicellatis, octosporis, 44 63 × 10-14; paraphysibus e basi valde ramosis, septatis, hyalinis 1,25-1,5 μ cr, cellula majori obscuriori terminatis; sporidiis distichis v. infra monostichis, brunneis, uniseptato-constrictulis, ovoideo-elongatis, loculo inferiori angustiori, 12-16 × 5-6.

Hab in thallo Parmeliae Delisei (Lichenes), Adge Herault Gallia (WEDDELL et A. DE CROZALS). — A Doth. Lichenum stromatibus immersis depressis praecipue differre videtur.

# Sect. 5. Hyalophragmiae

- CAMAROTELLA Theiss et Syd., Ann. Mycol. 13., 1915, p. 370 (Etym. a kamarotes incurvatus). Hypostroma epidermicum, hypothecium obscurum; paraphyses praesentes, sporidia hyalina quadrilocularia; caeterum ut in *Trabutia*. Typ. gen.
- 1. Camarotella Astrocaryae (Rehm.) Theiss. et Syd., l. c., cum icon. 5348

  Montagnella Astrocaryae Rehm, Syll. XIV p. 682.
- PHRAGMOCAUMA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 411. Est Catacauma, paraphysata, sporidis hyalinis quadrilocularibus donata. Typ. gen.:

- 1. Phragmocauma viventis (Oke.) Th. et Syd., l. c., Phyllachora viventis 5349 Cke.) Sacc., Syll. II p. 601. Syn. Homostegia Albizziae (Cke.) Berl. et Vogl., Syll. IX p. 1049.
- 2. Phragmocauma Kolowratiae Syd., Ann. Mycol. 15., 1917, p. 225.— 5356 Stromata epiphylla, sparsa, discreta, 2-4 mm. diam., orbicularia vel suborbicularia, nitidula leniter convexa, stromate parco sterili saepe in hypophyllo evoluto, loculi numerosi in quoque stromate, 100-160 μ lati et alti; clypeo opaco aterrimo 20-25 μ crasso, parietibus lateralibus 10-12 μ crassis brunneis; asci cylindracei vel cylindraceo-clavati, breviter stipitati, 8-spori, 90-115 × 10-15, parce paraphysati; sporae plerumque distichae, fusoideae, 3-septatae, non constrictae, 22-26 × 4,5-5, quaque cellula guttulata, hyalinae.

Hab. in foliis Kalowratiae elegantis (Zingiberaceae), prov. Rizal Luzon, Ins. Philipp. (H. S. JATES).

- SCIRRHOPHRAGMA Theiss. et Syd., Ann. Mycol. 13., 1915. p. 423. Stroma ut in *Scirrhia*; paraphyses praesentes; sporidia hyalina trilocularia. Typ. gen.:
- 1. Scirrhophragma regalis Th. et Syd., l.c.— Stromatibus copiosis caulicolis elongatis, linearibus, 1-2 mm. long. 200 μ cr., epidermidem demum nigricantem elevantibus; stromate in cortice evoluto ex hyphis parallele dispositis septatis brunneo-olivaceis 6-7 μ cr. efformato supra a clypeo òpace-nigro tecto; loculis rotundatis longitudinaliter seriatis, 150-170 μ diam., parietibus propriis destitutis; ascis parietalibus cylindraceis, breviter pedicellatis 80 90 × 8-9; paraphysibus copiosis tenuissimis; sporidiis distichis, hyalinis, elongatis 3-locularibus, 14-16 × 4, utrinque rotundatis, loculis inaequalibus praeditis.

Hab. in caulibus Osmundae regalis (Filices), Sperenbergin Brandenburgia, Germania (H. Sydow).

**EXARMIDIUM** Karst. — Syll. II, p. 648 (ut subgenus). — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 424.

Exarmidium blumeanum (Rehm) Th. et Syd., Ann. Mycol. 13., 1915, 5352
 p. 425, Rhopographus blumeanus Rehm, Ascomyc. Philipp. IV, Leaflets of Philipp. Botany VI (1913) p. 1936. — Stromatibus in cortice culmi primitus areolatis, 2 mm. circ. latis, mox lineariter confluentibus, denique connatis, cortice longe lateque nigrofuscata innatis; peritheciis monostichis, areolatim 10-12 arete congregatis, globulosis, 100 μ diam., peridermio mox semiglobose dein lineariter

1 mm. 10nge elato, hyalino obtectis, demum eo laciniatim perrunto denudatis: ascis fusiformibus, octosporis, 80-100 × 10-12; paraphysibus filiformibus, hyalinis, septatis, 2 µ cr.; sporidiis parallele dispositis, elongato-fusiformibus, apice superiore obtuso, inferiore subacuto, rectis, 7-9-septatis, guttulatis, hyalinis, 55 × 2,5-3.

Hab. in Bambusa blumeana (Graminaceae) emortua, Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

2. Exarmidium Paolii Baccarini, Eumyc. Somalia it., in « Missione Ste- 5353 fanini-Paoli » Firenze 1916, p. 196. - Stromatibus superficialibus in ligno decorticato insidentibus prominulis ac lineariter colliculosis; ad 3 ad 6 mm. et ultra longis, ad 1 mm. latis, gregariis ac saepe confluentibus; loculis uniseriatis 39-96 µ latis 39,2 µ crassis; ascis obovatis, sessilibus, paraphysatis, 12 \* 25; sporis cylindricoellipsoideis, 11,2 × 3,3, primitus continuis denique triseptatis hyalis. quaternis (?)

Hab. in ligno emortno decorticato, Solàgle, et Bur Eghérta, socia Gloniopsis somala, Somalia it., Africae trop. (PAOLI).

RHOPOGRAPHELLA P. Henn. - Syll. XVII p. 858 (ut subg.), XXII p. 440. - De hoc gen. cnfr. Theissen et Sydow (Ann. Myc. 13., 1915, p. 428). Typus gen. Rh. Gaduae P. Henn. (Syll. XVII p. 858) sec. v. Höhnel (Fragm. 615) ad Calosporam pertinet (Valsaceae), nec non Rh. Gynerii P. Henn., Rh. clavisporus (C. et Pk.) Sacc. et Rh. Taquarae Rehm.

1. Rhopographella reyesiana Rehm, Ascomyc. Philipp. V, Leaflets of 5354 Philipp. Botany, VI (1914) p. 2224. — Stromatibus plurimis innatis, plerumque arcte parallelis, interdum subcurvatis, 0,5-2 cm. longis, 1 mm. latis, peridermium striiformiter elatum longitudinaliter rimose perforantibus, extus intusque nigris, ostiolis minimis demum conspicuis; loculis plurimis monostiche innatis, globulosis, tenuissime parenchymatice contextis, 120 µ latis; ascis clavatis, apice rotundatis, octosporis, 50 \* 10; paraphysibus non conspicuis; sporidiis oblongo-fusoideis, utrinque acutatis, rectis, 1-dein 3-septatis, guttatis, non constrictis, hyalinis dein fuscidulis (mens. desunt).

Hab. in culmo emortuo Bambusae blumeanae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. RE-YES). — Intra rimas corticis hyphae torulosae fasciculatae, rectae, obtusae, septatae, fuscae progrediuntur.

- var. Gigantochloae Rehm, loc. cit. - Stromatibus primitus plerumque orbicularibus, minus arete regulariter parallelis et striiformiter

seriatis, 0,5-1 mm. latis, ostiolis perspicue prominentibus, paraphysibus filiformibus.

Hab. in G i g a n t o c h l o a (Gramin.), cum praecedente.—Rhopo-graphus hysterioides (Ces.) Sacc., Syll. II p. 648, ad calamos Bambusae, descriptione hymenii plane carens, ceterum simillimus videtur.

2. Rhopographella Ochlandrae Petch, Ann. R. Bot. Gard. Peradeniya, 5355 v. VI, P. III, 1917, p. 228. — Stromatibus maculis flavis congregatis, saepius hypophyllis, erumpentibus, nigris, rugosis, pulvinatis, peritheciis interdum subprominentibus, ostiolis non prominentibus; peritheciis circa 0,1 mm. diam., 2-3 in quoque stromate; ascis late clavatis vel ovalibus, pariete crasso, 4-? sporis; sporis parallelis, fusoideis vel subcymbiformibus, hyalinis, triseptatis, 28-36 × 3; paraphysibus linearibus, flexuosis, brevibus; pycnosporis hyalinis falcatis, vel varie curvatis, triseptatis, 32-70 × 3.

Hab. in foliis vivis Ochlandrae stridulae (Graminaceae), Gikiyanakande, Ceylon.

#### TELIMENA Rac. — Syll. XVI p. 631.

1. Telimena Panici Theiss. et Syd., Ann. Mycol. 13., 1915, p. 600.— 5356 Stromatibus crebre sparsis, parvis, utrinque visibilibus, opace nigris, prominulis, ostiolis hy phyllis praeditis, ovato-ellipsoideis, superfice zigrinata ostiolata; loculis parum numerosis, globosis, 140 170 μ diam., folium percurrentibus, supra et infra clypeo epidermoidali effuso tectis; ascis cylindraceis, sparse paraphysatis, breviter pedicellatis, 48-52 × 7-8, octosporis; sporidiis plerumque distichis, elongatis, utrinque parum angustatis non acutatis, quadrilocularibus, hyalinis, 11-13,5 × 3, loculis mediis plerumque brevioribus.

Hab. in foliis Panici patentis (Graminaceae), Luzon, prov. Laguna, Ins. Philipp. (MERRILL). — Sydow, Fungi exot exs. n. 266 sub Phyll. stenospora (B. et Br.) Sacc.

2. Telimena graminella H. et P. Sydow, Ann. Mycol. XII, 1914, p. 565.— 5357 Stromatibus in utraque foliorum pagina conspicuis, omnino innatis, phyllachoroideis, sparsis, ellipticis vel oblongis, 1-2,5 mm. longis, 1 mm. latis, atris, opacis, minute plurilocularibus; ascis cylindraceis, ad apicem obtusis, 65·100 × 8·11, octosporis; paraphysibus paucis, sed distinctis, hyalinis, filiformibus, 1 μ crassis; sporidiis distichis, exacte fusiformibus, utrinque attenuatis, rectis vel leniter curvatis, hyalinis, 3-septatis, guttulatis, 20·25 × 4·5, loculis extimis quam duobus interioribus duplo vel triplo longioribus.

Hab. in foliis Paspali sp. (Graminaceae), Angat prov. Bulacan, ins. Philippin. (M. RAMOS).

3. Telimena Bakeri Syd., Ann. Mycol., 15., 1917, p. 228. — Stromata 5358 folio saepe late decolorato innata, sparsa vel pauca striaeformiter collecta, saepe etiam in macula minuta flavida solitarie evoluta, epiphylla, parum prominula, elliptica, atra, minutissima et 1/2 mm. diam., usque 1,5 mm longa, opaca, loculos 1-3 includentia in hypophyllo etiam conspicua; asci cylindraceo-clavati, paraphysati, 70-90 × 12-14, octospori; sporae oblique monostichae vel distichae, fusoideae, utrinque acutae, rectae, 3-septatae, non constrictae, 24-28 × 4-7, hyalinae.

Hab. in foliis Schizostach y i sp. (Graminaceae), in summo vertice Mt. Maquiling Laguna, Ins. Philipp. (C. F. BAKER).

4. Telimena encaustica (Nyl.) Theiss. et Syd., Ann. Mycol. 13., 1915, 535. p. 599, Homostegia encaustica (Nyl.) Vouaux, Bull. Soc. Mycol. Fr. 1912, p. 197, Epiphora encaustica Nyl. in Flora, 1876, p. 238. — Stromatibus maculis nigris superficialibus simulantibus, demum plus minus effusis, 200-600 μ crassis e contextu hyphenchymatico efformatis, crebre ostiolatis; peritheciis plerumque bistratosis, subsphaeroideis, 140-230 μ diam.; ascis clavatis pedicello longiusculo noduloso praeditis, apice rotundatis, tunica crassa praeditis, octosporis, 63-82 × 13.5-16; paraphysibus numerosis, multiguttulatis, hyalinis filiformibus, parum septatis, ramosis, quandoque anastomosantibus, ascos longitudine superantibus, 1,5 μ cr.; sporis distichis v. tristichis, elongato-fusoideis, utrinque plus minusve acutatis sed etiam obtusis, rectis v. leniter curvulis, hyalinis v. leniter flavidulis triseptatis, ad septa constrictulis vel non, 22-30 × 3-5.

Hab. in thallo et apotheciis Parmeliae en caustae (Lichenes), Mont-dore, Gallia (LAMY).

PHRAGMOCARPELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 601.— Est *Phyllachora* sporidiis hyalinis quadrilocularibus, acutis v. obtusis, paraphysibus carenti. — Typ. gen.:

- 1. Phragmocarpella Ichnanthi (P. Henn.) Th. et Syd., l. c., Roumegueria 5360 Ichnanthi P Henn., Syll. XXII p. 437.
- 2. Phragmocarpella Puiggari (Speg.) Th. et Syd., l. c., Montagnella? Puig. 5361 gari Speg., Syll. IX p. 1048.
- 3. Phragmocarpella fusispora (Syd.). Syd. in Th. et Syd., l. c., Homostegia 5362 fusispora Syd., Syll. XXII p. 441.

#### Sect. 6. Phaeophragmiae

DERMATODOTHIS Racib. in Theiss. et H. Sydow, Ann. Mycol. XII 1914, p. 280; 13., 1915, p. 369. — Stroma *Trabutiae* inter cuticulam et epidermidem. Asei paraphysati octospori. Sporae brunneae, triloculares.

1. Dermatodothis javanica Racib. in Theiss, et H. Sydow l. c. p. 280. — 5363
Stromatibus epiphyllis, carbonaceis, depressis, rotundatis, 1-2.5 mm.
latis, inter cuticulam et epidermidem efformatis; peritheciis semilenticularibus, 120-150 μ altis usque 300 μ latis, in stromate immersis, ostiolo punctiformi prominulo praeditis; paraphysibus filiformibus; ascis linearibus apice rotundatis 70-85 μ long. 8-10 μ latis, octosporis; sporidiis elongato-ovoideis 12-14 × 3,5-4, transverse biseptatis et tune trilocularibus, apice rotundatis, ad septa indistincte constrictis, levibus, dein pallide brunneis. Stratu pycnidico (Hendersonia) saepe eodem stromate consociato sed pycnidiis magnitudine minoribus; sporulis ovoideis trilocularibus, 7 9 × 3-4, ad septa constrictis apice sporophororum singulis ortis.

Hab. in foliis Syploci sp. (Symplocaceae), ad Pangerango supra Tiitiuruk, in ins. Java.

RHOPOGRAPHUS Nits. — Syll. II p. 647, XI p. 378, XVI p. 630, XVII p. 857. — Theiss. et Syd., Ann. Mycol. 13., 1915, p. 425.

1. Rhopographus pusillus Spegaz., Rel. Myc. trop. etc. in Bol. Ac. Nac. 5364 Cienc. Cordoba, t. 23., 1919, Extr. p. 132. — Stromata pusilla 100-150 × 75-100 parenchymate innata ad epiphyllum plus minusve prominulo-manifesta, dense gregaria saepeque confluentia, atra glabra opaca, rimose dehiscentia, loculis difformibus pulpa alba farctis; ascis ellipticis breviter crasseque pedicellatis aparaphysatis, 30-32 × 10-15; sporis fusoideis utrinque acutiusculis, 3-septatis, 16-22 × 3-4. Hab. ad ramos emortuos? I licis cujusdam (Aquifoliaceae),

Hab. ad ramos emortuos? Ilicis cujusdam (Aquifoliaceae), Apiahy, Brasilia (J. PUIGGARI).

RHOPOGRAPHINA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 429. — Est Rhopographus paraphysibus destitutum; sporidiis pallidioribus — Typ. gen.:

1. Rhopographina Chamaemori (Rostr.) Th. et Syd., l. c., Rhopographus 5365 Chamaemori Rostr., Syll. XVII p. 857

Rhopographina Palmarum (v. Höhn.) Th. et Syd., 1. e., Rhopographus 5366
 Syll. fung. XXIV (VI-1926)

Palmarum v. Höhn., Fragm. zur Mykol. 775, in Stzgsb. Akad. Wiss. Wien CXXI, 1., p. 393, fig 3 (1912). — Stromatibus elongatis, 200- $300 \times 120$ , epidermidem pustulatim inflantibus, in maculis minutis brunneis indistincte limitatis et saepe confluentibus gregariis, 1-locularibus, lateraliter rimose dehiscentibus; contextu stromatis minute parenchymatico, brunneo; ascis sessilibus, late clavatis, sursum rotundatis crasseque tunicatis,  $35-54 \times 16-20$ ; paraphysibus diffluentibus, gelatinosis, epithecium crassum hyalinum efformantibus; sporidiis polystichis, oblongo-clavulatis, 5-6-septatis, diu hyalinis dein luteis demumque brunneis,  $15-19 \times 5-6$ , strato tenui mucoso obductis.

Hab. in foliis vivis Phoenicis natalensis, Tjibodas, Java (Rehm, Ascomyc. exs. n. 1944 sub Monographus Palmarum) — Species incertae sedis, ad Gloniellam vergens.

HOMOSTEGIA Fuck. — Syll. II p. 649, IX p. 1049, XIV p. 683, XVI p. 631, XVII p. 857, XXII, p. 440

Homostegia Durionis Racib. in Theiss. et Syd., Ann. Mycol. 13., 1915, 5367
 p. 606. — Stromatibus rotundatis, nigris, in mesophyllo efformatis,
 1-1,2 mm. latis, inter se 2-3 mm. remotis, vel usque 1-10 cm. rotundato-gregariis, in epiphyllo praecipue conspicuis, nitidis; loculis
 2-4, depresse globosis raro globosis 110-130 μ alt., 115-240 μ latis, in epiphyllo minute ostiolatis, parietibus parum evolutis; paraphysibus filiformibus; ascis cylindraceo-clavatis, octosporis, 86-98 × 16; sporidiis distichis, elongato-ovoideis, 28-32 × 7, rectis v. curvulis, quadrilocularibus, parietibus brunneolis juventute levibus demum minute verrucosulis.

Hab. in foliis Durionis zibethini (Bombacaceae), prope Buitenzorg, Java (RACIBORSKI).

2. Homostegia parasitica Rehm, Ascom. n. 894, Hedw. 1887, p. 16 extr., 5368 Syll. IX p. 1050, Ann. Mycol. 13., 1915, p. 134 (diagn. ampliata).—
Stromatibus superficialibus, nigris, applanatis, ambitu subcircularibus, 0,5-1 mm. diam., sed saepissime ob confluentiam angulatis, intus minute monostiche plurilocellatis, crebre minutissimeque ob ostiola punctulatis; ascis clavatis breviter crasseque stipitatis, 45-50 × 9-11, octosporis, filiformi-paraphysatis; sporidis distichis v. oblique monostichis, ellipsoideo-oblongis, utrinque acutulis, 14-16 × 4,5-5, initio biseriatim guttulatis. dein 5-septatis non constrictis, ex olivaceo subhyalinis.

Hab. ad ramos decorticatos putres C o r n i s a n g u i n e a e, parasitica in Eutypae latae stromate, prov. Rigny, Galliae (J. Flageoleti). — Specimina Flageoletiana optime evoluta cum diagnosi Rehmiana bene congruunt, non vero cum diagnosi Bertiae parasiticae H. Fabre quae fungus simplex est et non nisi loco convenit. (P. A. Sacc. in mns.).

3 Homostegia Pterocarpi Har. et Pat. in Bull. Mus. Hist. Nat. Paris 5369 1911, p. 368. — Epiphylla; stromatibus carbonaceis, pseudoparenchymaticis, in macula rufescente siccata sparsis, exiguis, 0,5 mm. circ. diam., convexis, initio nitidis, bullatis (loculis 1-2 in stromate singulo), fragilibus, facile friabilibus, nucleo brunneo, vix ostiolorum ope punctatis; nucleo ascis efformato subcylindricis, apice obtusis, basi attenuatis, 50 × 8-10; sporidiis octonis biseriatis cuneiformi-cylindraceis, uno apice vix attenuatis, utrinque rotundatis, fuscis, transverse biseptatis, 10 × 4; paraphysibus indistinctis.

Hab. in foliis Pterocarpi erinacei (Leguminosae), Chari: Gribingui, Congo gallico. — Species critica de qua enfr Theiss. et Syd., Ann. Mycol. 13., 1915, p. 608.

4. Homostegia parmeliana (Jacz. et Elenkin) Vouaux, Bull. Soc. Mycol. 5370 1912, p. 198, Trematosphaeriopsis parmeliana (Jacz.) Elenk., Lichens facultatifs p. 10 (rossice).— Stromatibus in thallo amphigenis nigris primum punctiformibus dein pulvinatis et 2 mm. diam. et ultra, parum depressis, contextu plectenchymatico; pseudoperitheciis immersis, ovoideis, piriformibus v. subsphaeroideis ostiolo simplici praeditis; ascis cylindricis, stipitatis, octosporis, 80-85 × 16-20; paraphysibus filiformibus numerosis; sporidiis distichis subhyalino-flavidulis, fusoideis, triseptatis, rectis v. curvulis, 30 × 6-8.

Hab. in thallo Parmeliae mollius culae var. vagantis (Lichenes), Rossia (ELENKIN). — Cnfr. etiam Theiss. et Syd., Ann. Mycol. 13., 1915, p. 604.

5. Homostegia lophiostomacea (Rehm) Theiss. et Syd., Ann. Mycol. 13., 5371 1915, p.606, Auerswaldia (Phaeochora) lophiostomacea Rehm, Ascomyc. Philipp. VI, Leafits. of Philipp. Bot. v. VI, 1914, p. 2274. — Stromatibus cortice late atrato gregarie innatis eoque obtectis, parallelis, forma Lophiostomatis innatis, anguste ellipsoideis, fere linearibus, 0,5 mm. longis, peridermium protuberantibus, medio paullu lum superantibus, vix disrumpentibus; loculis in stromate binis arcte congregatis, 150 μ latis, ostiolis non conspicuis; ascis clavatis, apice rotundatis, 90-120 \* 20, paraphysibus?; sporidiis fusiformibus. utrinque acutatis, medio septatis, paullulo constrictis, rectis, cinereo-fu-

scidulis, 30 × 6-8.

Hab. in petiolo emortuo Arengae sacchariferae (Palmae), Los Baños, ins. Philipp. (S. A. REYES). — Ex subgen. Phaeochora v. Höhn.

6. Homostegia Symploci Racib. in Syd. et Theiss., Ann. Mycol. 13., 5372 1915, p. 606. — Stromatibus numerosis, irregulariter distributis, rotundatis, 1-2,5 mm. latis, rubro-nigris, macula nulla limitatis; loculis contertis depresse globosis, 160-210 μ latis 120-140 μ altis, minute vix prominenter ostiolatis; ascis cylindraceis, octosporis, 85-104 × 11-14; sporidiis fusoideis, quadrilocularibus, utrinque lanceolato-acutatis, medio constrictulis, levibus, parietibus brunneis praeditis, 16-21 × 4-5.

Hab. in foliis Symplocaceae), Djasinga prope Buitenzorg, Java (RACIBORSKI).

- CLYPEOSTROMA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 609. Est *Phyllachora*, paraphysibus destituta sporidiis quadrilocularibus coloratis donata Typ. gen.:
- Clypeostroma hemisphaericum (Berk.) Theiss. et Syd., Ann. Mycol. 5373
   13., 1915, p. 609, Dothidea hemisphaerica Berk., Syll. II p. 643, Syn. Cocconia discoidea (C. et M.) Sacc., Syll. X p. 50.

### Sect. 7. Dictyosporae

- DICTYOCHORA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 610. Est Phyllachora paraphysibus destituta, sporidiis brunneis muralibus. — Typ. gen.
- 1. Dictyochora Rumicis (Karst.) Th. et Syd., Ann. Mycol. 13., 1915, 5374 p. 610, Dothidella Rumicis (Karst.) Sacc., Syll. II p. 630.
- 2. Dictyochora Gambellii Ch. F. Fairman, Mycologia 10., 1918, p. 106.— 5375 Scromatibus primum subepidermicis dein hysteriformiter erumpentibus caulicolis longitudinaliter distributis; loculis 2-9 aggregatis rotundatis v. mutua pressione subangulosis, nigris, 150-470 μ diam.; ascis clavato-cylindraceis, breviter stipitatis, 100 × 10-12; paraphysibus nullis; sporidiis oblique monostichis v. supra subdistichis, 5-7 septatis ad septa constrictulis, loculis terminalibus plerumque simplicibus, mediis muriformibus, fusoideo-oblongis, brunneo-flave-scentibus dein opacis, 20-27 × 7-10.

 $\it Hab.$  in caulibus emortuis  $\it Z$  e a e  $\it M$  a y d i s, « Gambel farms», N. Y. Amer. bor.

- DICTYOCHORELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 610 (Etym. dictyon rete, cribrum, et achor ulcus). Est Dictyochora paraphysibus praesentibus.
- Dictvochorella abscondita Theiss. et Syd., I. c. p. 610. Loculis fo-5376 lio omnino immersis, clypeo 400-450 μ lato praeditis, indistincte ostiolatis; clypeo supra 20-25 μ infra 20-22 μ cr., parietibus late ralibus loculorum tenuibus; loculis 320-380 μ latis 260-300 μ alt.; ascis cylindraceis, breviter pedicellatis, p. sp. 82 × 10-13, paraphysibus filiformibus praeditis, octosporis; sporidiis monostichis v. distichis, pallide brunneis, 6-7 locularibus, medio constrictis, 22-24 μ long. supra medium 10 μ latis, infra 8-9 μ, utrinque rotundatis.

Hab. in foliis Composita e scandentis cujusdam, S. Francisco, Brasilia. — Socia Lizonia acqualis.

### Sect. 8 Scolecosporae

- OPHIODOTHELLA v. Höhn. Sacc., Syll. XVII p. 859 (ut subgenus). Microphiodothis Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 133 (Etym. a micron parvum et Ophiodothis quia simile). Stromata parvula unilocularia biophila innata, atra, coriaceo-subcarbonacea; loculi parietibus propriis destituti; asci octospori; sporae lineares, hyalinae. Est Puiggarina scolecospora. Huc pertinet Ophiodothis paraguayensis Speg. et tunc Microph. paraguayensis Speg. vocanda Cnfr. etiam Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 612.
- Ophiodothella Ingae (P. Henn.) Theiss. et Syd., Ann. Mycol. 13., 1915, 5377 p. 614, Phyllachora? Ingae P. Henn., Hedw. vol. 48 (1908) p. 8.—
   Maculis sparsis vel effusis, brunneo-fuscis; stromatibus amphigenis, sparsis vel aggregatis, atris. angulato-pulvinatis, planis, 1.2 mm. diam.; peritheciis immersis, globulosis, obtuso-ostiolatis; ascis cylindraceo-clavatis, obtusis, paraphysatis,... immaturis.

Hab. in foliis Ingae sp. (Leguminosae), Iponema, S. Paulo, Brasilia.

2. Ophiodothella Fici Ern. A. Bessey, Mycologia 11., 1919, p. 55, tab. 5378 5. — Ophiodothis Fici Earle in Herb. — Stromatibus foliicolis 1-10 mm. diam., sparsis v. quandoque concentrice aggregatis, infra nigrescentibus supra epidermide lacerata albicante diu tectis, folium incrassatum (650-860 μ) efficientibus in maculis flavescentibus margine ferrugineis insidentibus, peritheciis 400-450 μ altis 300-500 μ latis, ostiolis minute papiliatis praeditis; ascis elongato-fusoi

deis 105-175  $\approx$  12-16, infra sensim angustatis, octosporis quandoque paraphysibus filiformibus septatis (?) ascos longitudine aequantibus obvallatis; sporis filiformibus continuis 77-87  $\approx$  4,7-6,2, dilute brunneis granuloso-farctis, medio vacuolo (?) 5  $\mu$  diam. praeditis; pycnidis consociatis immersis, 180-300  $\mu$  diam. 75-100  $\mu$  altis; unilocularibus primum astomis; conidiis elongatis, clavulatis, curvulis, hyalinis v. dilute brunneolis continuis, 19  $\approx$  1.

Hab. in foliis Fici aureae (Moraceae), prope Larkins Dade Co. Miami Little River Florida, nec non in Cuba, Amer. bor. — Species haec quia paraphysata potius ad gen. sequentem pertinere videtur.

- SCOLECODOTHIS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 412. Est Catacauma paraphysata, sporidiis filiformibus continuis donata. Typ. gen.:
- 1. Scolecodothis Castaneae Racib. in Theiss. et Sydow, Ann. Myc. 13., 5379 1915, p. 13. Maculis epiphyllis atro-brunneis, 5-20 mm. lat., flavorubro-marginatis; stromatibus epiphyllis nervisequis, linearibus v. moniliformibus, rectis, 5 mm. longis, atro-nitidis; loculis globosodepressis v. ovoideis, discretis, seriatis,  $400 \times 100$ , albis, ostiolis circularibus,  $18 \mu$  diam. (inclusa zona circumeunte); ascis filiformi-paraphysatis,  $50.58 \times 12$ , octosporis; sporidiis hyalinis, levibus, fusoideis, inaequilateris,  $40.44 \times 2,5.3$ , in asci lumine superne fasciculatis.

Hab. in foliis Castaneae argenteae (Fagaceae), Salak, Gedeh et Megamendong in ins. Java, valde frequens (RACIBORSKI).

2. Scolecodothis circularis (Bres.) Theiss. et Syd., Ann. Mycol. 13., 1915, 5380 p. 413, Oxydothis circularis Bresad., Ann. Mycol. 1906, p. 311 (nom. nud.). Syn. Cocconia sphaerica Rick, Fungi austro-amer. 72.— Stromatibus in maculis brunneis insidentibus, hypophyllis, irregulariter rotundatis, usque 4 mm. diam., nigris, nitidis, solitariis v. aggregatis; loculis confertis, rotundato-cuboideis, 360-450 μ latis 300-320 μ altis; ascis octosporis, utrinque angustatis breviter pedicellatis, 105 × 18-22; sporidis parallele tetrastichis, rectis v. curvatis, hyalinis, continuis 56-66 × 4-5.

Hab. in foliis Myrsines sp. (Myrsinaceae), « Uva vermelha » dicta, Rio Grande do Sul, Brasilia.

3. Scolecodothis hypophylla (Theiss.) Th. et Syd., l. c., Oxydothis hypo-5381 phylla Theiss., Broteria v. XII, 1914, fasc. 1., p. 28. — Stromata bypophylla, phyllachoroidez, primum simplicia orbicularia 3-6 mm.

diam., pulvinato-plana, atro nitentia, colliculosa, ostiolis crebris papillatis minimis punctato asperula; stroma primarium deinde annulo secundario stromatum eingitur diam. 1-1,5 cm. v. etiam tertio folii lamina fuscescente; maculis epiphyllis nullis; asci elongati, cylindraceo-clavati v. medio ventricosuli et utrinque attenuati, octospori,  $110\cdot120 \approx 15\cdot20$ , sporidia lanceolato-filiformia, hyalina, continua, guttulis repletis, utrinque acuta, recta,  $80\cdot90 \approx 6\cdot7$ .

Hab. in foliis Myrtaceae, São Leopoldo, Brasilia.

## Subfam. 3. Montagnelleae

### Sect. 1. Hyalosporae

- HAPLOTHECIUM Theiss. et Syd., Arn. Mycol. 13., 1915, p. 614.— Loculi immersi perithecioidei stromate distincto destituti apice tantum plerumque connexi. Asci octospori paraphysati. Sporidia unilocularia hyalina. Typ. gen.:
- 1. Haplothecium amenti (Rostr.) Th. et Syd., l. c., Phyllachora amenti 5382 Rostr., Syll. XI p. 372.
- MONTAGNELLINA v. Höhn., Fragm. z. Mykol. XIV n. 769 (1912). Theiss. et Syd., Ann. Mycol. 13., 1915, p. 615. Loculi subepidermici perithecioidei vix prominuli maturitate apice aperti, a stromate in mesophyllo laxe connexi, clypeum non efformante. Asci aparaphysati, octospori. Sporidia unilocularia hyalina. Typ. gen.:
- 1. Montagnellina Pithecolobii (Racib.) v. Höhn., l. c., Euryachora Pithe- 5383 colobii Racib., Syll XVI p. 624.
- 2. Montagnellina stellaris (Pers.) Th. et Syd., 1. c., cum icon., Eurya-5384 chora stellaris (Pers.) Fuck., Syll. II p. 625.

# Sect. 2. Hyalodidymae

- PSEUDOSPHAERELLA v. Höhn., Fragm. z. Mykol. XIII n. 692 (1911).— Theiss. et Syd., Ann. Mycol. 13., 1915, p. 618. — Est *Haplothecium* ascis aparaphysatis, sporidiis hyalodidymis. Typ. gen.:
- 1. Pseudosphaerella Baccharidis (Rehm) v. Höhn., I. c., Lizonia Bac- 5385 charidis Rehm, Syll. XVI p. 486.
- 2. Pseudosphaerella Cupaniae (Rehm) v. Höhn., I. c., Lizoniella Cupa- 5386 niae Rehm, Syll. XXII p. 165.
- 3. Pseudosphaerella Haplopappi (Rehm) Th. et Syd., Dothidella Haplo- 5387 pappi Rehm, Syll. XIV p. 677.

- DIPLOCHORELLA Syd., Ann. Mycol. 11., 1913, p. 408. Theiss. et Syd., l. c. 13., 1915, p. 620. - Syn. Diplochora Syd., l. c. p. 60 nec v. Höhnel. - Stromata totam folii crassitudinem occupantia, in utraque folii pagina discoidee erumpentia, planiuscula, parte loculigera in superficie matricis sita vel vix tantum immersa, loculis multis praedita. Asci clavati, aparaphysati. Sporidia oblonga, medio 1-septata, hyalina. - Gen. Euryachorae proximum a quo differt stromatis caracteribus.
- 1. Diplochorella fertilissima H. et P. Sydow, l.c. p. 60, fig. 2.— Stroma- 5388 tibus immersis, totam folii crassitudinem occupantibus et in utraque foliorum pagina discoidee erumpentibus, sparsis v. plus minus aggregatis, rotundatis, planiusculis, 1/2-3/4 mm. diam, opacis, atris, contextu in parte peritheciigera ex cellulis polyedricis minutis 5.7 µ diam. composito; loculis numerosissimis (20.60) in quoque stromate, conico-globulosis 35-50 µ diam. prominulis; ascis fasciculatis, cylindraceis v. cylindraceo-clavatis, brevissime stipitatis v. sessilibus. apice rotundatis, 80-125 > 12-16, octosporis, aparaphysatis; sporidiis distichis, oblongo-fusiformibus, utrinque rotundatis, medio 1septatis, non constrictis, hyalinis, 17-20 \* 5,5-6, loculo superiore subinde parum latiore.

Hab. in foliis vivis X y lopiae aethiopicae (Anonaceae). Amani, Africa or. (A. ZIMMERMANN).

2. Diplochorella indica (Sacc.) Theiss. et Syd., Ann. Mycol. 13., 1915, 5389 p. 662, Dothidella indica Sacc., Ann. Mycol. XII, 1914, p 302. -Foliicola et petiolicola; stromatibus mox superficialibus, imprimis hypophyllis, disciformibus, planis, orbicularibus, rarius obtuse augulosis, v. confluentibus, 2-4 mm. diam., 80-100 μ cr., opace nigris, superficie obsolete reticulata et minutis ostiolis punctulata, tenuiter coriaceis, loculis numerosis, crebris, subrotundis, minimis, 60-80 µ diam., nigricantibus; ascis clavatis, apice rotundatis, breviter sensim pedicellatis, 45-55 × 12-14 plerumque contortis, parce filiformiparaphysatis, octosporis; sporidiis distichis, tereti-clavulatis, utrinque rotundatis, medio 1-septatis, non constrictis, farctis, simulque minute 2-guttulatis, hyalinis, 18-20 × 6-7,5.

Hab. in foliis petiolisque omnino vivis Meliaceae cujusdam. an Turreae!, pr. Bombay, Ind. orient. (Prof. SAXTON).

3. Diplochorella Burchelliae Sydow, Ann. Mycol. 18., 1920, p. 158. - 5390 Stromata amphigena, plerumque autem hypophylla, in epiphyllo maculas brunneolas saepe leniter depressulas efformantia, quoad magnitudinem et formam valde ludentia, sive minuta singularia

0,5-1 mm. diam., sive pluria aggregata saepe elongata striiformia vel imperfecte circularia 1-3 mm. longa, atra; loculi peritheciiformes subepidermales, densissime dispositi et inter se stromatice connexi 100-130  $\mu$  alti, 70 90  $\mu$  lati, ostiolo typico carentes; asci apaphysati, subsessiles vel brevissime stipitati, cylindraceo clavati, ad apicem rotundati, octospori, 65-80  $\times$  10-11; sporae distichae, oblongo-ellipsoideae, medio 1-septatae, non constrictae, utrinque rotundatae, hyalinae, 15-17  $\times$  3,5-4,5.

Hab. in foliis Burchelliae bubalinae (Rubiaceae), verisimiliter in Africa austr. lecta.

- CYCLODOTHIS Syd. in Leaflets of Philipp Bot. VI (1913) p. 1929; Sydow in Theiss. et Sydow, Ann. Mycol. 13., 1915, p. 626.— (Etym. cyclos, circulus et dothis pro Dothidea).— Stromata per epidermidem erumpentia, exacte annuliformia, loculos peritheciiformes continentia, loculis minutis pariete distincto minute celluloso praeditis. Asci clavati, indistincte paraphysati, octospori. Sporidia elongata, oblongo cylindracea, medio 1-septata, hyalina.— A Diplochorella differt dispositione loculorum.
- 1. Cyclodothis Pachysandrae Hemmi, Bot. Magaz. Tokyo v. XXIX, 5391 1915, p. 414, cum icon. Stromatibus hypophyllis, in epiphyllo maculas distinctas rotundas canas efficientibus, sparsis, per epidermidem erumpentibus, plus minus exacte annuliformibus, annulum 1-4 mm. diam., longum formantibus, contextu minutissime celluloso atro-brunneo; loculis numerosissimis, fere peritheciiformibus, densissime dispositis, globoso-conicis, 48-98 μ diam., pariete indistincto v. distincto minute celluloso atro-brunneo, ostiolis leviter prominulis; ascis clavatis v. oylindraceis, apice obtusis, subsessilibus, 44-56 × 8-12, octosporis, indistincte paraphysatis; sporidiis oblique monostichis usque distichis, fusoideis, rectis v. curvulis, utrinque attenuatis, medio 1-septatis, non constrictis, pluriguttulatis, hyalinis, 14 20 × 3-4.8.

Hab. in foliis vivis Pachysandrae terminalis (Buxaceae), in urbe Maruyama prov. Ishikari Hokkaido, Japonia.

2. Cyclodothis pulchella Syd., loc. cit. — Stromatibus hypophyllis, in 5392 epiphyllo maculas plus minus distinctas decoloratas efficientibus, per epidermidem erumpentibus, exate annuliformibus, annulum 2-4 mm. diam. formantibus, atro-brunneis, contextu minutissime celluloso, ob ostiola prominula minutissime asperatis; loculis numerosissimis, peritheciiformibus, densissime stipatis, globoso-conicis, 65-90 µ

5200

diam., pariete distincto minute celluloso obscure brunneo, nucleo albo, ostiolis leniter prominulis; ascis clavatis subsessilibus, 55-70 × 14-18, octosporis, indistincte paraphysatis; sporidis 3-4-stichis, oblongo-cylindraceis, rectis vel leniter inaequilateris, utrinque obtusis, medio 1-septatis, non constrictis, hyalinis, 25-35 × 4-5.

Hab. in foliis Piperis corylistachyi (Piperaceae), Todaya, Mt. Apo, Mindanao, ins. Philipp.

- SCIRRHIACHORA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 626. Est Diplochorella loculis lineariter dispositis. Typ. gen.:
- 1. Scirrhiachora groveana (Sacc.) Th. et Syd., l. c., Scirrhia groveana 5393 Sacc., Syll. IX p. 1040.
- 2. Scirrhiachora comedens (Schw.) Th. et Syd, l. c., Apiospora come- 5394 dens (Sch.) Sacc., Syll I p. 541.
- ROSENSCHELDIELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 645.—
  Loculi superficiales perithecioidei, in stromate basali cuticula immerso discoideo insidentes, ostiolo genuino destituti. Asci fasciculati basilares, octospori, aparaphysati. Sporidia hyalodidyma. —
  Typ. gen.:
- 1. Resenscheldiella Styracis (P. Henn.) Theiss. et Syd., l. c., Naema-5395 cyclus Styracis P. Henn., Hedw. vol. 48, (1908) p. 8.— Stromatibus hypophyllis, sparsis vel gregariis, pulvinato superficialibus, atris, verrucoso-rugulosis, 1-2 mm. diam.; loculis immersis, verrucoso-ostiolatis, rotundatis, ca. 180 μ diam.; ascis clavatis, apice obtuse rotundatis, paraphysatis octosporis, 70-90 × 15-20; sporidiis subtristichis, oblongo-fusoideis vel clavatis, obtusis, hyalinis, 1-septatis, 22-27 × 5-6.

Hab. in foliis Styracis, Morro Pellado, S. Paulo, Brasilia.—
A Dothidella pulverulenta (B. et Br.) distincta.

- MONOPUS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 647. Loculi perithecioidei superficiales, pede brevi centrali in matrice radicati, ostiolo genuino destituti. Asci aparaphysati. Sporidia hyalodidyma. Typ. gen.:
- 1. Monopus pulverulentus (B. et C.) Th. et Syd., 1. c., Dothidella pul- 5396 verulenta (B. et C.) Sacc., Syll. II p. 631.
- HAPLOTHECIELLA v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, p. 251 (descriptio nulla); XXXVI, 1918, p. 314. Stroma hyphen-

chymaticum. Perithecia intraepidermica et cuticula connexa. Asci paraphysati octospori. Sporidia hyalina acqualiter bilocularia. — Typ. gen.:

1. Haplotheciella Hellebori (Chaill.) v. Höhn., l. c. — Fructificatio al- 5397 tera Dothisphaeropsis Hellebori v. Höhn.

#### Sect. 3. Phaeodidymae

- PYRENOBOTRYS Theiss. et Syd., Ann. Mycol. 12., 1914, p. 182; 13., 1915, p. 627. Fructificatio perithecioidea subepidermica maculiformis, ostiolo genuino destituta. Stroma nullum vel vix ex hyphis laxis efformatum. Asci octospori; paraphyses filiformes. Sporidia phaeodidyma. Typ. gen.:
- Pyrenobotrys conferta (Fr.) Th. et Syd., l. c., Stigmatea conferta 5398 (Fr.) Sacc., Syll. I p. 544. Syn. Dothidella Vaccinii Rostr., Syll. IX p. 1038.
- 2. Pyrenobotrys Heliconiae (P. Henn.) Th. et Syd., l. c., Dothidella He- 5399 liconiae P. Henn., Syll. XVII p. 850.
- CROTONE Theiss. et Syd., Ann. Mycol. 13., 1915, p. 629. Stroma intramatricale montagnellaceum. Loculi subepidermici apice prominuli ostiolo genuine destituti. Asci aparaphysati octospori, infra caespitosi. Sporidia phaeodidyma. Typ. gen.:
- Crotone Drimydis (Lév.) Theiss. et Syd., l. c., Bagnisiella Drimydis 5400 (Lév.) Sacc., Syll. II p. 590. Syn. Montagnella Drimydis P. Henn., Syll. p. 629.
- 2. Crotone Emmoti (P. Henn.) Th. et Syd., l. c., Dothidea Emmoti P. 5401 Henn., Syll. XIV p. 681.
- TERATOSPHAERIA Sydow, Ann. Mycol. 10., 1912, p. 39. Theiss. et Syd., l. c., 13., 1915, p. 631. Loculi subepidermici, perithecioidei, ramoso-radiantes, ostiolo genuino destituti, contextu stromatico laxe hyphenchymatico. Asci caespitosi basilares, aparaphysati, octospori. Sporidia phaeodidyma.
- Teratosphaeria fibrillosa Syd., l. c., cum icon. Peritheciis amphigenis, plerumque dense in fibrillas eximie formatas ramosas quasi
  stellatim dispositas usque 1 cm. longas seriatim aggregatis, in contextu matricis profunde immersis, globosis v. depresso-globosis,
  150-220 μ diam., coriaceo-carbonaceis, atris, mutua pressione subinde angulosis, circa verticem matrice nigrificata cinctis, ostiolo

atro tantum erumpente; ascis fasciculatis, sessilibus v. subsessilibus, clavatis v. saccatis, saepe curvatis, apice rotundatis v. etiam attenuatis, muco involutis, apice crassius tunicatis, 70-110 × 20 36 aparaphysatis; sporidiis octonis, distichis v. tristichis, cylindraceis, medio 1 septatis, mox non, mox leniter constrictis, subinde curvulis, utrinque rotundatis, primo intus minute guttulatis, tandem eguttulatis et non v. vix constrictis, ex hyalino flavo-fuscidulis v. potius olivaceo fuscidulis, 35-46 × 9-12.

Hab. in foliis Proteae grandiflorae, Bains Kloof Wellington C. C., Africae austr. (E. M. DoldGE).

- STALAGMITES Theiss. et Syd., Ann. Mycol. 12., 1914, p. 189; 13.; 1915, p. 650. Stroma erumpens cylindraceum, supra digitiformi divisum, loculi singuli apicem digitationum occupantes, parietibus propriis et ostiolis genuinis destituti. Asci octospori aparaphysati. Sporidia phaeodidyma. Typus gen.:
- 1. Stalagmites tumefaciens (Syd.) Th. et Syd., l. c., tab. IV, fig. 15, 5403

  Dothidea tumefaciens Syd., Syll. XXII p. 435.
- DOTHIDOTTHIA v. Höhnel, Ber. deutsch. bot. Ges. XXXVI, 1918, p. 5404
  312. Perithecia prominentia; hypostromate hyphis perpendiculariter dispositis insidentia. Paraphyses filiformes. Asci octospori.
  Sporidia phaeodidyma. Typus generis Doth. Symphoricarpi (Rehm ut Pseudotthia) v. Höhn.

# Sect. 4. Hyalophragmiae

- MONTAGNELLA Speg. Syll. II p. 646, IX p. 1045, XI p. 377, XIV p. 682, XVI p. 629, XXII p. 439. Syn., sec. Theiss. et Syd., Ann. Mycol. 13., 1915, p. 634, Gillotia Sacc. et Trott., Syll. XXII p. 253.
- 1. Montagnella Alyxiae Pat. et Har., Bull. Soc. Mycol Fr. 1912, p. 5405 284. Stromate atro vel atro-brunneo, coriaceo, non carbonaceo; peritheciis globosis, <sup>1</sup>/<sub>3</sub>·<sup>1</sup>/<sub>2</sub> mm. diam., concoloribus, laevibus, poro pertusis, aliquando collabentibus, carnoso-coriaceis; ascis octosporis, pluriseriatis; ascosporis hyalinis dein vix brunneolis, elongatis, utraque fine obtusis vel leniter attenuatis, triseptatis, ad septa constrictulis, 23-30 × 8-10.

Hab. in tumoribus ad ramos vivos praecipue in axillis Alyxia e sp. (Apocynaceae), Tahiti (PAUCHEE).

SYNCARPELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 631.— Est Montagnella ascis paraphysatis donata.— Typ. gen.:

- 1. Syncarpella tumefaciens (Ell. et Harkn.) Th. et Syd., l. c., Monta-5406 gnella tumefaciens (Ell. et H.) Berl. et Vogl., Syll. IX p. 1046. Syn. Mont. Brotheriana P. Henn., Syll. XVI p. 629.
- 2. Syncarpella tuberculiformis (Ell.) Th. et Syd., l. c., Plowrightia tu- 5407 berculiformis Sacc., Syll. II p. 638.

#### Sect. 5. Hyalodictyae

- HYALOCURREYA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 640.— Loculi subepidermici stromate connexi et stromate basilari adnati, apice subliberi ostiolo genuino destituti. Asci basilares fasciculati, aparaphysati. Sporidia hyalodictya. Typ. gen.:
- 1. Hyalocurreya sandicensis (E. et E.) Th. et Syd., l. c., Curreya sandicensis El. et Ev., Syll. XIV p. 684.
- 2. Hyalocurreya palmincola (Rehm) Th. et Syd., l. c., Curreyella palmin- 5409 cola (Rehm) Sacc. et Tr., Syll. XXII p. 441.

#### Sect. 6. Phaeodictyae

CURREYA Sacc. — Syll. II p. 651, IX p. 1051, XI p. 378, XIV p. 684, XVI p. 632, XVII p. 585.

1. Curreya peckiana Sacc., Ann. Mycol. XIII, n. 2 (1915) p. 117. — 5410 Stromatibus laxe gregariis, plano pulvinatis, prominentibus superficie leviter areolato-rimosis, epidermide cinctis, nigris, 1/2 - 3/4 mm. diam.; loculis atris saepe stratosis 90 μ diam.; ascis tereti-clavatis, deorsum sensim breviter tenuatis, 60-70 × 10-12, octosporis; paraphysibus copiosis filiformibus, sursum lenissime incrassatis; sporidiis distichis v. oblique monostichis, elliptico-oblongis, utrinque obtusulis, v. basi acutulis, subinaequilateris, 5-7-septato-muriformibus, ad septum medium leviter constrictis, fulvo-fuligineis.

Hab. in ramulis corticatis emortuis Nemopanthi mucronatae, Tupper Lake N. Y., Arg. (House). — Pulchella, distincta species.

EPIBOTRYS Theiss. et Syd., Ann. Mycol. 13., 1915, p. 644. — Stroma montagnellaceus, intramatricale, erumpens. Loculi liberi perithecioidei stromate insidentes ostiolo genuino destituti. Asci aparaphysati, octospori. Sporidia phaeodictya. — Typ. gen.:

16

1. Epihotrys bambusicola (Speg.) Th. et Syd., l. c., Curreya? bambu- 5411 sicola Speg., Syll. IX p. 1051.

#### Sect. 7. Scolecosporae

- OPHIOCARPELLA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 644. —
  Est Montagnella paraphysibus destituta, sporidiis hyalinis filiformibus septatis donata Typ. gen.:
- 1. Ophiocarpella tarda (Harkn.) Th. et Syd., l. c., Ophiodothis tarda 5412 Harkn., Syll. IX p. 1051.

#### ROSENSCHELDIA Speg. - Syll. IX p. 1036, XVII p. 852.

1. Rosenscheldia brenckleana (Rehm) Theiss. et Syd., Ann. Myc. 13., 5413 1915, p. 649, Bertiella brenckleana Rehm, Ann. Mycol. IX, 1911, p. 364. — Perithecia in soros secundum caulem longitudinales, 1-2 cm. long., 1-2 mm. lat. nigrescentes utrinque acutatos, caulis vix decorticati hypertrofici insidentes arctissime congregata, non connata neque mycelio perspicuo conjuncta, globulosa, glabra, nigra, poro perspicuo pertusa, excipulo parenchymatico, crasso fusco, 0,15 mm. diam.; asci cylindraceo-clavati, apice rotundati, octospori, ca. 100 × 12-14 J ope —; sporae cylindraceae, utrinque subacutatae, rectae v. subcurvatae, 3-septatae, ad septa vix constrictae, quaque cellula 2-guttulata, hyalinae, 30-36 × 5-6, distichae; paraphyses hyalinae.

Hab. ad caulem Solidaginis, Kulm N. Dak., U.S. America, North Dakota Fungin. 373 a (Brenckle) — Sec. Theiss. et Syd. l. c. eodem est ac Rosensch. Heliopsidis (Schw.) Th. et Syd., Syll. II p. 646 (ut Montagnella).

- DISCOCHORA v. Höhnel., Ber. deutsch. bot. Ges. XXXVI, 1918, p. 315.— 5414

  Habitus Phyllachorae sed ostiolo circinnato. Typ. gen. Disc. Ilicis
  (Schl.) v. Höhn., fructificatio altera Physalosporae Ilicis (Schl.) Sacc.
- SEPTOCHORA v. Höhnel, Ber. deutsch. bot. Ges. XXXV, 1917, p. 254.— 5415 Descriptio nulla.— Typ. gen.: Septochora samaricola (Died.) v. Höhn. loc. cit.

GENERA INCERTAE SEDIS V. E DOTHIDEACEIS REMOVENDA

MICRODOTHELLA Syd., Philipp. Journ. of Sc. C. Bot. v. IX, 1914 n. 2 p. 169. — Stromata subcuticularia, radiato-contexta, crustaceo-con-

vexa, hypothecio epidermali stromatico, 1-2 locularia. Asci typice octospori, paraphysibus atypicis. Sporidia hyalina unilocularia.— Typ. gen.; Micr. ramularis (Ell. in Asterina) Th. et Syd. = Myiocopron ramulare (Ell.) Speg.

1. Microdothella culmicola Syd., l. c., fig. 1, Theiss. et Syd., Ann. Myc. 5416 13., 1915, p. 259. — Stromatibus sparsis vel hinc inde aggregatis, subinde binis confluentibus, minutis 200-450 μ diam., rotundatis, leniter convexis, atris, cum basi in apidermide sitis in hypodermidem hyphas paucas solitarias fuscas tantum emittentibus, centro opacis, ad marginem dilute fuscis, ex hyphis radiantibus 2-3 μ latis remote septatis (articulis 10-18 μ longis) maeandrice curvatis contextis; loculis 1-2 in quoque stromate, poro rotundo 15-20 μ lato tandem apertis; ascis primitus globulosis, mox ovatis vel oblongis, apice rotundatis, sessilibus, octosporis, rarius 4-sporis, 35-55 × 18-22, paraphysatis; sporidiis plerumque distichis, ellipsoideis vel oblongo-ellipsoideis, continuis, hyalinis, 17-20 × 8-9.

Hab. ad culmos emortuos Ischaemi (Graminaceae), Lake Manguao et Chloridis incompletae (Graminaceae), Silonga, Palawan, Ins. Philipp. (MERRILL).

- GRIGGSIA F. L. Stevens et N. Dalby, Bot. Gazette, 68., 1919, p. 224 (Etym. a Cl. Rob. F. Griggs). Perithecia solitaria dimidiata, astoma, demum apice irregulariter aperta e stromate superficiali epidermico orta; mycelio vegetativo interno; parietibus peritheciorum crassis parenchymaticis. Asci basilares octospori. Sporidia ovoidea, hyalina 1-locularia. Paraphyses hyalinae elongatae filiformes. Conidia in pycnidiis dimidiatis efformata. Gen. Rhipidocarpon Th. et Syd. in Dothideales affinis, sed ostiolo carenti ad Perisporiaceas vergens.
- 1. Griggsia cyathea F. L. Stevens et N. Dalby, l. c. tab. XV-XVI. 5417 Peritheciis subhemisphaericis 200-300 μ diam. 180-160 μ altis, parietibus basi et apice 24 μ circ. cr.; ascis ovoideis 51 × 17-24; sporidiis 17 × 10, ovoideis hyalinis, continuis. Statu conidico leptostromaceo, pycnidiis dimidiatis amphigenis v. plerumque epiphyllis, praedito; pycnidiis ambitu circularibus 200-315 μ diam. 10-30 μ altis, nigris, dense reticulatis, rectis 7 μ circ. latis; maculis irregularibus 1-3 mm. diam., numerosis; sporulis unilocularibus, ovoideis v. piriformibus, obscuris, obtusis, 28-34 × 14.

Hab. in frondibus Cyatheae arboreae (Filices), Maricao et El Alto de la Bandera, Porto Rico.

# Fam. 4. Hypocreaceae DE Nor. \*)

#### Sect. 1. Allantosporae

ALLANTONECTRIA Earle - Syll, XVI p. 1140, XVII p. 778.

 Allantonectria Yuccae Earle — Syll. XVII p. 728. — Sacc., Notae 5418 mycol. XXII p. 167 (1917).

Hab. in foliis Yuccae glaucae (Liliaceae), parasitica in pycnidiis Kellermanniae, Mandan (Leg. O. A. STEVENS, comm. Brenckle). — Perithecia 130·150 μ diam.; asci 22·28 × 3,3·3,5, octospori; paraphyses guttulatae, deliquescentes; sporidia botuliformia (ut in Valsis) 4,7·5 × 1,8, hyalina; ostiolum, 10·11 μ diam., rubelloperiphysatum; contextus tenuiter cellulosus, rubescens.

PSEUDONECTRIA Seaver 1909 (= Nectriella Sacc. 1877 non Nitzchke 1869; Byssonectria Karst. 1879).

1. Pseudonectria bambusina Syd., Ann. Mycol. 15., 1917, p. 214. – Petrithecia plus minus dense aggregata, sed semper discreta, stromate nullo, superficialia, basi hyphulis paucis tenuibus pallidis cincta, conoideo-globosa, sed obtusa, glabra, levia, obscure brunnea, sub micr. flavo-brunneola vel rufo-brunnea, 75-100 μ diam., ostiolo parum perspicuo dilutiore, contextu irregulariter minuteque parenchymatico, circa ostiolum e fibris radiantibus composito; asci tenerrimi, fusoideo-clavati, 22-28 × 6-9, aparaphysati, octospori; sporae oblique monostichae vel distichae, oblongae vel anguste ellipsoideae, utrinque obtusae, continuae, saepe minute guttulatae, hyalinae, 9-10 × 2,5-3,5.

Hab. in culmis emortuis Bambusae (Graminaceae) in consortio Hyphomycetis (Fungi) cujusdam, Rizal, Ins. Philipp. (H. S. YATES). — Nectriellae Bambusae proxima nisi identica.

2. Pseudonectria pipericola F. L. Stevens, Botan. Gazette, 65., 1918, 5420 p. 230. — Peritheciis numerosis, minuvis, 100-125 μ diam., rubridis, setulis paucis ostiolum circumdantibus praeditis; setulis brevibus 20-30 μ, obtusis, continuis; ascis cylindraceis octosporis, 50 × 5-7, aparaphysatis; sporidiis monostichis ellipsoideis v. oblongis, obtusis continuis hyalinis, 9-10 × 3-4. — Mycelio in Meliola arcte adpresso.

<sup>\*)</sup> Cufr. Maire, Ann. Mycol. IX, 1911 p. 316, v. Höhnel et Weese, ibid. d. 422, et XII, 1914, p. 128.

Hab. parasitica in Meliola tortuosa (Fungi), in foliis Piperis umbellati et marginati (Piperaceae), in Porto Rico. — Affinis Nectriae mycelophilae Peck.

3. Pseudonectria Metzgeriae Ade et v. Höhnel, Ann. Mycol. 17., 1919, 5421 p. 117. — Peritheciis rubro-ocraceofiavis, superficialibus plerumque solitariis, globosis, supra discoideis, usque 270 μ altis 240 μ latis, disco 110 μ lato, pilis plus minus numerosis hyalinis simplicibus obtusis, 20·26 × 3·3,5, praedito; parietibus perithecii 12 μ cr., ostiolo periphysibus circumdato; paraphysibus nullis; ascis octosporis cylindraceis v. cylindraceo-clavatis, tenuiter tunicatis, 40·70 × 3·4, infra breviter v. longe pedicellatis; sporis monostichis v. distichis, rectis utrimque fusoideo-tenuatis, unilocularibus, 5 × 1,3·1,5; in medio sporarum corpusculis 2 raro 3 fusoideis 1,5 μ long. J. ope cyanescentibus sistunt.

Hab. in parte superiore thalli Metzgeriae furcatae (Hepaticae), inter Brückenau et Mitgenfeld, Rhön, Germania (A. ADE).

#### Sect. 2. Hyalosporae

NECTRIELLA Sacc. — Syll. II p. 448, IX p. 941, XI p. 354, XIV p. 621, XVI p. 559, XVII p. 778, XXII p. 445.

1. Nectriella Cucumeris J. Hanzawa, Zeitschr. Pfizkr. XXIII (1913) 5422 p. 71, c. ic. — Conidiis haud stratosis, forma ludibundis, globosis, fusoideis, leniter clavatis vel cylindricis, rectis vel curvulis, utrinque rotundatis, 1-2-septatis, 14-23 \* 6-8, hyalinis; conidiophoris simplicibus vel ramosis; chlamydospóris terminalibus vel intercalaribus, nunc unicellularibus, globosis, nunc bicellularibus, piriformibus, ad septum constrictis, 10-12 μ circ. longis, levibus, interdum seriatis; peritheciis superficialibus, stromate indistincto insidentibus, sparsis vel coacervatis, ovoideis vel globosis, verrucosis, 640-960 \* 560-720, collo indistincto, ostiolo irregulari; aseis octosporis, cylindraceis vel clavatis, 230-250 \* 25-34, operculo apicali dehiscentibus; sporidiis irregulariter dispositis, ovoideis vel ellipsoideis, hyalinis, 18-22 \* 12-17; paraphysibus filiformibus 4-8 μ crassis.

Hab. parasitica in radicibus caulibusque Cucum eris (Cucurbitaceae) in calidariis cultis, Hannover, Germania.

Nectriella Casaresi Gonz. Fragoso, Mem. R. Soc. Españ. Hist. Nat., 5423
 t. 11., 1919, 3., p. 109. — Peritheciis globosis, usque 300 μ diam., sparsis vel paucis gregariis, contextu subceraceo-membranaceo, indistincte pseudoparenchymatico, rubro-aurantiaceo, ostiolo regulariter

pertuso, stromate nullo, ad basim hyphis hyalinis, filiformibus, ramosis, circumdatis; ascis numerosis, fasciculatis, cylindraceis, apicem rotundatis, brevi crassiuscule stipitatis, usque 50 µ long. 5-6 µ diam, aparaphysatis, octosporis; sporidiis pallide aurantiaceis, hyalinulis in ascis muco evolutis, ellipsoideis, usque 6 \* 1,7, utrinque rotundato-incrassatis, 2-guttulatis, guttulis primum subhyalinis, dein facile colorantibus (Bleu C4 B).

Hab. in foliis vivis Frullaniae dilatatae (L.) Dum. (Hepaticae), prope Villagarcia de Arosa, Pontevedra, Hispania (D.

A. CASARES).

3. Nectriella maquilingica Sacc., Notae Myc. XXIII p. 69 (Accad. Ve- 5424 neto-trent. 1917). - Peritheciis hinc inde sparsis v. in caespitulos approximatis, minutis, non collabentibus, dilute roseis, vix pruinulosis, 175-200 µ diam.; contextu tenui, celluloso, pallide roseo; ostiolo papillato; ascis tereti-clavatis, 60-65 \* 7-9, apice obtuse tenuatis, lumine bifoveolatis, deorsum sensim tenuatis 4-sporis; paraphysibus crassis (spuriis?); sporidiis distichis v. oblique monostichis oblongo fusoideis, utrinque obtusiuscule tenuatis, 11-12 \* 3,6, nubilosis, hyalinis, continuis.

Hab. in ramis emortuis Leucaenae glaucae (Legumino-

sae), M. Maquiling, Ins. Philipp.

4. Nectriella Ptychospermatis Rehm, Ascomyc. Philipp. VI, Leaflets 5425 of Philipp. Bot. VI (1914) p. 2275. - Peritheciis gregariis, innatoerumpentibus, globulosis, flavidis, 120 µ diam., glabris, ostiolo conoideo minimo obscuriore praeditis, tenuiter parenchymatice contextis, mox collabentibus; ascis cylindraceis, 70-80 \* 9-10, aparaphysatis, octosporis; sporidiis distichis, clavatis, continuis, hyalinis, 10 > 5.

Hab. in Ptychospermate Macarthurii (Palmae), Los

Baños, ins. Philipp. (S. A. REYES).

5. Nectriella philippina Rehm, Ascomyc. Philipp. IV, Leaflets of Phi- 5426 lipp. Botany VI (1913) p. 1935. — Peritheciis sessilibus, nonnullis arcte coacervatis, lenticularibus, sulfureis, minutissime fuscidule papillulatis, 150 µ diam., tenuiter imbricato-membranaceis, flavidule contextis, glabris; ascis ovoideis, sessilibus, crasse tunicatis, apice rotundatis, octosporis, 50 \* 20-24; paraphysibus subramocis 1 μ cr.; sporidiis distichis, ovoideis, utrinque rotundatis, continuis, hyalinis, 15-18 × 9.

Hab. ad caulem emortuum Passiflorae quadrangularis (Passifloraceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

HYPONECTRIA Sacc., Syll. II p. 455, XI p. 354, XIV p. 621, XVI p. 559, XXII p. 443.

1. Hyponectria Embeliae Petch, Ann. R. Bot. Gard. Peradeniya, v. VI, 5427 P. III, 1917, p. 228 — Maculis rubro-aurantiacis, rotundatis, ad 2 cm. diam., ostiolis minutis, pellucidis punctatis; peritheciis immersis, sparsis, ovoideis vel subglobosis, supra conicis, 0,4 mm. alt., 0,25-0,3 mm. diam., pariete hyalino, ostiolo epiphyllo; ascis cylindraceis, breviter pedicellatis, octosporis, 100-120 × 10-14; paraphysibus linearibus, numerosis; sporis monostichis saepius oblique, late ovalibus, hyalinis, continuis, episporio crassiusculo, 10-12 × 7-8.

Hab. in foliis Embeliae viridiflorae (Diapensiaceae), Hakgala, Ceylon.

2. Hyponectria Phaseoli F. L. Stevens, Bot. Gazette 70., 1920, p. 401.— 5428 Maculis amphigenis circularibus 5-10 mm diam., e paucis numerosis saepe confinentibus, pallide fiavidis, translucidis margine indefinitis; peritheciis copiosis, immersis, translucidis, 200-230 μ diam., maturis ostiolo distincto 20 μ diam. prominenti et margine structura clypeata donato praeditis; ascis e linearibus clavatts 75 μ long., octosporis; sporidiis monostichis ad apicem irregulariter confertis, irregulariter e sphaeroideis ovoideis, saepe e mutua pressione angulosis, continuis, hyalinis, 9-10 × 12; paraphysibus filiformibus ascos subaequantibus.

Hab in foliis Phaseoli adenanthi et Phaseoli sp. nec non Vignae vexillatae (Leguminosae), in Porto Rico pluribus locis.

- 3. Hyponectria Memecyli Petch, Revis. Ceylon Fungi, Ann. R. Bot. 5429 Gard. Peradeniya, v. VI, P. IV, 1917, p. 328.— Sphaeria Chionanthi Berk. et Br., Fungi of Ceylon n. 1114; Didymella Chionanthi (Berk. et Br.) Saccardo, Syll. I p. 549; Sphaerella Ch. (B. et Br.) Cooke.— Sec. Cl. Petch in l. c., fungus est vera Hyponectria, sed sporis demum uniseptati etiam Charonectria, sed matrice errata (non Chionanthus zeylanicum vero Memecylon umbellatum, Melastomataceae) species Hyph. Memecyli vocanda.
- 4. Hyponectria sinensis Sacc., Philipp. Journ. of Sc. Manila, P. I, 1921, 5430 p. 599. Maculis corticalibus subalutaceis, versiformibus; peritheciis dense gregariis, subcutaneis, globulosis, 0,20-0,25 mm. diam., pallidis, ostiolo subumbilicato albo erumpenti; contextu laxe cel-

luloso, sordide aureo; ascis cylindraceis, breviter stipitatis, 130-150 \* 17·19, apice rotundatis, tunica initio incrassata praeditis, paraphysibus diffluentibus, octosporis; sporidiis oblique monostichis oblongo-limoniformibus, apicibus brevissime apiculatis, rectis v. inaequilateris, 28 × 12, hyalinis, farctis.

Hab. in ramis morientibus Citri sp. (Rutaceae), Kwang Tung, Paak Shan, Cina (REINKING). — Ad genus Physalosporinam nutat.

BYSSONECTRIA Karst. — Syll. II p. 456, IV p. 942, XI p. 354, XIV p. 623, XVI p. 560, XXII p. 446.

1. Byssonectria aggregata Bresad., Ann. Mycol. IX, 1911, p. 275. — 5431 Subiculo pallido ex hyphis conidiferis, 1-4 μ cr., efformato; conidiis hyalinis, obovatis, 12-15 × 6-9; peritheciis caespitulose aggregatis, obovatis, tenuiter papillatis, furfuraceis, 1/4 mm. diam., carneolis, contextu parenchymatico; ascis cylindraceis v. clavatis, 100-120 × 7-15, plus minusve stipitatis; sporidiis monostichis, distichis v. conglobatis, hyalinis, continuis, oblongis, 11-13 × 4-5; paraphysibus nullis.

Hab. ad corticem arborum, Kisantu, Congo (VANDERYST). — In subiculo adsunt quoque hyphae stramineae, septatae, tenuiter tunicatae, majores, quarum connexionem cum hyphis conidiferis Auctor eruere non potuit.

UROPOLYSTIGMA A. Maublanc, Bull. Soc. Mycol. de Fr., XXXVI, 1920, p. 36 (Etym. a oura cauda et stigma punctum). — Stroma subcarnosum, fulvum, depresso-clypeatum, epidermide persistente tectum; perithecia immersa; asci cylindracei, 8 spori, paraphysati; sporidia elliptica, sursum in rostrum attenuata, continua, hyalina. — A Polystigma stromate incompleto, sporidis caudatis diversum; caractere stromatis gen. Apiosphaeriae v. Höhn.

1 Uropolystigma atro-testaceum A. Maublanc, l. c., tab. III fig. 1-4.— 5432 Maculis sparsis v. gregariis, orbicularibus, 3 8 mm. diam., amphigenis, ad epiphyllum planis, fulvis, dein maculis nigris, subnitentibus, angulosis nervulisque limitatis centro ornatis, demum nigris, annulo fulvo cinctis, ad hypophyllum leviter convexis, testaceis v. aurantio-testaceis, margine striatulis, centro ostiolis punctatis, demum tuberculatis. Stromatibus sub epidermidem persistentem nascentibus, depresso-clypeatis, intus pallidis, usque ad 400 μ crassis: contextu subcarnoso, e cellulis seriatis, hyalinis, tenue tunicatis formato. Peritheciis immersis, globoso-lenticularibus, 250-500 μ diam.

tunica tenui, hyalina, stromate adnata praeditis; ostiolis hypophyllis, primum impressis, obscurioribus; ascis cylindraceis, apice obtusis incrassatisque, deorsum plus minusve longe pedicellatis, 150-210  $\times$  8-9 (pars. sporif. 120-165  $\mu$ ), paraphysibus numerosis, filiformibus; sporidiis monostichis (raro medio distichis), oblongis, basi obtusis, sursum (rarius deorsum) in rostrum conoideum, rectum vincurvatum, acutiusculum desinentibus, hyalinis, continuis, granulosis, 25-31 (cum restro)  $\times$  5-7. Mycelio hyalino, in parenchymate evoluto.

Hab. in foliis vivis Malpighiaceae cujusdam, Ouro Preto et Caraca, Brasiliae.

- LEPTOCREA Syd., Ann. Myc. 14., 1916, p. 87 (Etym. leptus tenuis et creas caro, ob stroma tenue carnosulum).— Stromata subepidermica, innata, laeticoloria, 1-v. confluendo 2-loculigera. Asci clavati, paraphysati, 8-spori. Sporidia oblonga, continua, hyalina. Conidia discoidea, continua, colorata.
- 1. Leptocrea orbiculata Syd., l. c. p. 87, fig. 5. Stromatibus in epiphyllo tantum visibilibus, maculis nullis vel obsoletis pallidis indeterminatis insidentibus, sparsis, subinde duobus juxtapositis et confluentibus, orbicularibus, 175·250 μ latis, usque 100 μ altis, subepidermalibus, flavo-rufis. centro papillato-perforatis, pariete 15·25 μ crasso carnosulo flavido minute celluloso, loculum singulum continentibus. Ascis cylindraceis, breviter stipitatis, 65·80 × 10·14, octosporis, filiformiter paraphysatis; sporidiis distichis, oblongis, utrinque saepe leniter attenuatis, sed apicibus obtusis, continuis, egutulatis, hyalinis, 12·15 × 4·4,5; stromatibus conidiigeris similibus, sed paullo minoribus; conidiis e fronte visis discoideis, 6,5·8 μ diam., e latere visis ellipsoideis vel oblongis, continuis, fuligineis, levibus, guttula 1 centrali oleosa praeditis, tandem protusis et matricem inquinantibus, sporophoris hyalinis suffultis.

Hab. in foliis Pithecolobii sp. (Leguminosae), Seringal, Auristella Rio Acre, Peruvia (E. ULE).

#### PHYSALOSPORINA Woron. - Syll. XXII p. 444.

1. Physalosporina Tranzschelii Woron., Ann. Mycol. IX, 1911, p. 224. 5434 Rehm, Ascom. Exsicc. fasc. 46 n. 1935. — Stromatibus e cortice caulis erumpentibus, dein valde excrescentibus, 3-4 cm. (usque ad 10-12 cm.) longis, plerumque totum caulem cingentibus, ex cellulis parenchymaticis hospitis mutatis atque hyphis constructis; extus

cinereis (sub lente fuligineis), intus albidis v. pallide roseis (sub lente incoloratis v. umbrinis); peritheciis in superiorem partem stromatis immersis, vix ostiolis eminentibus, globosis v. oblongis atque in superiore parte leviter coarctatis (300)-400-435(-600) \* (275)-300-320(-345), contextu parenchymatico fuligineo; ascis cylindraceis v. cylindraceo-fusoideis, 130-135 \* 10-12 (14), paraphysatis, membrana apice, saepe incrassata et poro pertusa; sporis monostichis, ovoideis, 13-15 > 7,5-8. - Pycnidiis angulato-globosis, saepe oblongis. 165-220 × 90 200 (plerumque 160-190 µ), conspicue rostratis, stromati immersis v. subsuperficialibus, saepe inter se coalescentibus, contextu parenchymatico fuligineo; sporulis bacillaribus.  $4-5 \approx 1$ .

Hab. in ramis Caraganae fruticis (Leguminosae), Gub. Ufa distr. Belebej prope Durassovo, Rossia (SIRAJEVSKIJ).

2. Physalosporina Onobrychidis (Iaap) Saccardo, Physalospora Onobrychi- 5435 dis Jaap, Ann. Mycol. 14., 1916, p. 14. - Peritheciis late sed laxe gregariis, subcutaneis, demum ostiolo per epidermidem tumidulum erumpentibus, globosis, e flavido brunneolis, 150-300 µ lat., contextu stramineo-flavo, circa ostiolum obscuriore; ascis tereti-fusoideis, breviter crasseque stipitatis, apice late rotundatis, 80-100 × 10-20, octosporis; sporidiis irregulariter monostichis, in medio asco saepe horizontalibus, ellipsoideis, rotundatis, 10.20 > 7-10, continuis, hyalinis, grosse granulosis, strato mucoso carentibus.

Hab. in foliis vivis et languidis On obrychidis Capitisgalli (Leguminosae), pr Trau, Dalmatiae.

3. Physalosporina Ducellieri Maire, Bull. Soc. H. N. de l'Afr. du Nord, 5436 1917, p. 160 fig. 2. - Stromate e pallido incarnato, demum rufobrunneo, ex hyphis valde incrassatis, amyloidiferis, intercellularibus, per totum folium expansis contexto; peritheciis epiphyllis sparsis v. gregariis, immersis, rubris, ostiolo demum prominulo, fuscescenti, minuto, subglobosis v. ovoideo-lageniformibus, 200-205 \* 150-200, contextu celluloso, granulis rubro-aurantiis farcto; paraphysibus filiformibus, septatis, membrana gelificata mox evanidis; ascis cylindraceis, inoperculatis, membrana gelificata praeditis, 75-85 \* 10-12; sporidis monostichis, ellipsoidels, levibus, hyalinis continuis, 2-8 guttulatis, 13-15 \* 7-8; pycnidiis epiphyllis, subepidermicis, subglobosis, 70-100 µ diam., subhyalinis; sporulis hyalinis, 4-5 \* 1,5-2,5.

Hab. in foliis Onobrychidis Capitis-galli (Leguminosae), in dunis Maison-Carrèe et in Kabylia, Africae bor. — Etsi

diagnoses satis different, species a praecedente non videtur diversa.

GLAZIELLA Berk. - Syll. II p. 581, IX p. 1004, XVI p. 615.

1. Glaziella Bakeriana Sacc., Notae Mycol. XXIII p. 69 (Accad. Vestata neto-trent. 1917). — Stromatibus alte pulvinatis, 3.4 mm. diam., irregulariter e basi plana hemisphaericis, levibus, vix ostiolis minimis punctulatis, rufescentibus, extus demum nigricantibus, contextu celluloso fusco-purpureo; peritheciis globulosis, stromate omnino immersis, plerumque monostichis, 1/3 mm. diam.; contextu celluloso saturate purpureo; ascis cylindraceis, exiguis, apice obtusulis, subsessilibus, 28-32 × 4,5-5, octosporis, aparaphysatis; sporidiis monostichis, rarius medio distichis, ellipsoideis, apice rotundioribus, 7-8 × 3,5, hyalinis, obsolete guttulatis.

Hab. in culmis emortuis B a m b u s a e v u l g a r i s (Graminaceae), Los Baños, Ins. Philipp. — Eximirs fungillus, habitu Hypoxyli sed fructificatione (quae rarius pertecta) et indole omnino diversus.

2. Glaziella cyttarioides Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 5438 . Cienc. Cordo a, t. 23., 1919, Extr. p. 119. — Subglobosa 20.40 mm. diam. mediocri lateraliter culmo adfixa eumque non v. vix amplectens, primo albescens, serius in tertio infero applanatulo fertilis flavida minutissime densissimeque porosa ac subvelutina, ceterum sordide fusca glabra laevis, intus farcta carnoso-compacta alba; loculi dense constipati ostiolo pro ratione latissimo (50-60  $\mu$ ) pertusi; asci lineares octospori, 350  $\times$  10; sporae filiformes tenuissime fasciculatae hyalinae, 250  $\times$  1.1,5.

Hab. ad ramos vivos Guaduae sp. (Graminaceae), in silvis Coaguazù, Americae austr. trop. (B. Balansa). — Colore Mycomalo bambusino Möll., forma Ascopolyporo polychroo Möll. affinis sed coeterum diversa.

## Sect. 3. Phaeosporae

MELANOSPORA Corda — Syll. II p. 461, IX p. 950, XI p. 356, XIV p. 626, XVI p. 563, XVII p. 781, XXII p. 452.

Melanospora Asparagi G. Arnaud, Ann. Service Epiphyties t. 2., 1915, 5439
 p. 273, cum icon. (absque diagn.). — Peritheciis sphaeroideis nigris
 200 μ circ. cr. collo brevi terminatis, parietibus translucidis, flavobrunneis; ascis mox diffluentibus et tunc aegre visibilibus; sporidiis breviter fusoideis brunneis, 17 \* 1. — Status conidicus quan-

doque in culturis tantum visus, ad gen. Stilbum pertinens, et verisimiliter cum Melanospora connexo.

Hab. in caulibus Asparagi officinalis (Asparagaceae). quos valde vexat, Montpellier, Gallia.

2. Melanespora rhizophila Pegl. et Sacc., Ann. Mycol. 11., 1913, p. 16. - 5440 Peritheciis subsparsis, v. gregariis, minutissimis, superficialibus, globulosis, 150-200 μ diam., in ostiolum cylindraceum, 160 × 30, apice fimbriatum abrupte tenuatis, hinc phialiformibus, glabris, luce directa nigricantibus, contextu vero tenuiter carnosulo, sordide roseo, perithecii minute parenchymatico, ostioli prosenchymatico; ascis ovato-oblongis, 50-55 \* 20-22, subsessilibus, octosporis, aparaphysatis, mox evanidis; sporidiis distichis ellipsoideo-limoniformibus. h. e. utrinque apiculatis, primo brunneis grosse 1-guttulatis, dein fuligineis.

Hab, in radicibus putrescentibus Cucurbitae Peponis (Cucurbitaceae), Ferrara, Ital. bor. socia Fusarii specie forte ejusdem statu conidiophoro (V. PEGLION). - Affinis Melanosporae vervecinae, a qua glabritie et minutie omnium partium dignoscitur. Perithecia interdum etiam intra radiculas putres matricis inveniuntur.

3. Melanospora papillata Hobson, Proc. Amer. Acad. 1912, p. 251 t. II 5441 fig. 1-26. - Peritheciis sparsis v. gregariis, superficialibus, membranaceis, semidiaphanis, stramineis v. laete brunneolis e globoso piriformibus, 400-500 × 350-450, papilla setis erectis, subdivergentibus, continuis, 100-170 µ longis superata; ascis clavatis; sporidiis inaequilateris, lunulatis, 25 × 10, e flavido brunneis, demum nigris; conidiis copiosis, e sphaerico ovoideis pseudobasidiis phialiformibus suffultis; bulbillis flavido-brunneis, multicellularibus, ambitu irregularibus, 50-60 µ diam., interdum amplioribus.

Hab. in cortice vivo Quercus agrifoliae (Cupuliferae), Pomona California, Amer. bor.

4. Melanospora anomala Hobson, Proc. Amer. Acad. 1912, p. 257, t. II 5442 f. 27-30, tab. III f. 1-15. - Peritheciis sparsis v. gregariis, superficialibus, membranaceis, e stramineo brunneolis, globosis v. subglobosis, 350-450 \*.250-350, ostiolo inconspicue papillato, calvo; ascis....; sporidiis inaequilateris, sublumulatis, 28 \* 14 e flavido brunneo-nigricantibus; conidiis e sphaerico ovoideis, hyalinis, pseudobasidiis phialiformibus suffultis; bulbillis multicellularibus flavidobrunneis subglobosis, 70-140 μ diam., v. elongatis usque ad 180 μ.

Hab. in fructibus Aesculi Hippocastani (Hippocastanaceae), (spanish-chestnuts, ex Hispania?), Boston, Amer. bor.

5. Melanospora mattiroliana Mirande, Bull. Soc. Mycol. Fr. XXXII 1916, 5443 p. 72 fig. 1-3. — Peritheciis gregariis, superficialibus, subglobosis, 240-340 μ diam., pallide flavidis, translucidis, pilis hyalinis, septatis conspersis; ostiolo cylindraceo recto v. curvulo, concolori, 195-360 × 59-65, interdum multiplici, apice fimbriato; ascis late clavatis, 8-sporis, 50-60 × 25-30, crassiuscule pedicellatis, mox diffluentibus, filiformi-paraphysatis; sporidiis e globoso late ellipsoideis, utrinque acuminatis, 14-24 × 11-19, fusco-olivaceis, crebre guttulatis, fusco-olivaceis, demum in massam mucosam nigricantem expulsis.

Hab. in foliis et caulibus plantarum, Grenoble, Galliae.— Simul occurrit st. conidiophorus Spicariae sp. referens, conidiophoris  $50~\mu$  longis, acro pleurogene sporiferis, pseudobasidiis (phialis) verticillatis v. subsparsis, ventricosis, apice acutis; conidiis ellipsoideoteretiusculis, 15-20-catenulatis,  $25-9 \approx 2$ . A Mel. globosa ostiolo breviori, paraphysum praesentia, a Mel. gibelliana sporidiis subglobosis videtur distincta.

6. Melanospora Mangini Vincens, Bull. Soc. Mycol, Fr. 33., 1917, p. 69, 5444 c. icon. — Peritheciis superficialibus, sparsis v. aggregatis, globu losis, 200-350 μ diam., collo cylindraceo, brevi, truncato, ciliis destituto; initio succineis dein brunnescentibus; ascis copiosis clavatis 40-50 × 10-15, facile diffluentibus, parce paraphysatis; sporidiis limoniformibus, atro-brunneis, 15-20 × 10-12, episporio leviter long. ruguloso-plicato; forma conidica Spicariae affinis decumbens; pseudobasidiis sparsis, phialiformibus 7-10 × 2,5-3; conidiis hyalinis ovoideis v. ellipsoideis, 3-5 × 1,5-2,5.

Hab. in ligno putrescenti (bois bleu), in Gallia (MANGIN).

7. Melanospora curvicola Hobson, Proc. Amer. Acad. 1912, p. 254, t. III 5445 f. 16-24. — Peritheciis sparsis v. gregariis, superficialibus, membranaceis, semidiaphanis, stramineis dein brunneolis, e globoso piriformibus, 450-550 ≈ 350-450, rostello definito, 85-140 μ longo praeditis; setulis terminalibus 100-170 μ longis, erectis, subdivergentibus, continuis acutis subulatis; ascis....; sporidiis inaequilateris, sublunulatis, 25 ≈ 10 e flavido brunneo-nigricantibus; conidiis hyalinis e sphaerico ovoideis pseudobasidiis phialiformibus suffultis; bulbillis multicellularibus flavido-brunneis, irregularibus, 50-60 μ diam., rarius 100 μ.

Hab. in fimo cuniculorum, Cambridge Mass., Amer. bor. (THAX-TER). — Praeter conidia descripta, occurrunt formae Hargiae et Acremoniellae adscribendae.

8. Melanospora Schmidtil P. A. Saccardo n. sp., Melanospora sp. Alfr. 5446 Schmidt, Jahresh Schles. Gesellsch., 1912, p. 22.— Peritheciis initio subiculo albo effuso immersis, flavo-brunneis v. subrubellis, solitariis, sparsis, globosis, pilis septatis, hyalinis, divergentibus conspersis, 210-320 μ diam., totis 400-900 μ altis, ostiolo cylindraceo apice fisso 400-500 μ alto, basi 50 μ cr., contextu parenchymatico subdiaphano, cellulis globoso angulosis 9-12 μ diam.; ascis 8-sporis, mox diffluis; sporidiis ellipsoideis, utrinque apiculatis, 22-24 × 15,5-17, opace atro-brunneis, apiculis minutis, hyalinis.

Hab. in fimo caprearum, Amani, in Africa orient. — Diagnosis satis plena ut species nomine proprio distingui mereatur.

- SPHAERODES F. E. Clements, Genera of Fungi 1909, p. 44 et p. 173.— 5447 Est Sphaeroderma esubiculatum. Typus gen Sph. episphaericum (Ph. et Pl.) F. E. Clen. Cnfr. Syll. II p. 460. Si hoc nov. gen. validum, vero Vittadinula Sacc. vocandum (Syll. II p. 560).
- RHYNCHOMELAS F. E. Clements, Genera of Fungi 1909, p. 44, 173.— 5448

  Est Melanospora stromatica. Typus M. arenaria Mont.

## HYPOXYLINA Starb. - Syll. XXII p. 453.

1. Hypoxylina philippinensis Rehm, Ascom. Philippin. VII, in Leaft. 5449 of Philippin. Bot. VIII, 1916, p. 2921.— Perithecia sessilia, plerumque 2·4 in caespitulis orbicularibus 2 mm. latis, arcte congregata, atra, glabra, sphaeroidea, mox patellaria, distincte marginata, 0,3-0,8 mm. lata, sicca valde corrugata, ad basim distincte parenchymatica, versus marginem ex cellulis circa 20 × 10, pseudoprosenchymatice contexta nigro-coerulea; ascis clavatis, apice rotundatis et crasse tunicatis, 80-90 × 12, 8-sporis; 1-sporis ellipsoideis, 1-cellularibus, glabris, subfuscis, 12-15 × 7, 2 versus basim 1-stichis; paraphysibus hyalinis, vix visibilibus.

Hab. ad ramos emortuos Derris philippinensis (Leguminosae), Los Baños, Ins. Philipp. (C. F. BAKER).

# COLLETOMANGINIA Har. et Pat. — Syll. XXII p. 454.

Colletomanginia paradoxa Har. et Pat.— Sacc., Syll. 1. c.
 Hab ad truncos A bietis pectinatae (Coniferae), in M.
 Bo child, Africa orient. britannica (Rotschild!). — Cl. Hariot in litt. declarat etymon generis, non ut explicatur in Syll. 1. c. sed ex colletos, junctus et Manginia derivatum, sed ratio pariter me latet (Sacc. in ms.).

5450

DASYPHTHORA F. E. Clements, Genera of Fungi 1909, p. 45, 173. — 5451 Est Nectria pilosa. — Typus D. lasioderma (Ell., in Nectria, Syll. II p. 505).

## Sect. 4. Hyalodidymae

NECTRIA Fr. — Syll. II p 479, IX p. 955, XI p. 357, XIV p. 628, XVI p. 565, XVII p. 778, XXII p. 455.

### I. Eu-Nectria

Nectria Funtumiae Massee, Kew Bull., Miscell. Inf. 1909, p. 147 — 5452
 Caespitulis erumpentibus minutis, 3-6 perithecilgeris, sparsis; perithecilis globoso-depressis. glabris. levibus, coccineis, 350-400 μ diam., ostiolo crasse obtuseque papillato brunneo instructis; ascis cylindraceis, apice obtusis, rotundatis, octosporis; sporidiis oblique monostichis, ellipsoideis, hyalinis, 1-septatis, 14-15 » 6.

Hab. parasitica in truncis vivis Funtumiae elasticae (Apocynaceae) quos necat, Kew, Anglia. — A N. ditissima peritheciis gregarie sparsis, latioribus, ostiolo magis prominenti differt.

2. Nectria meliolicola F. L. Stevens, Bot. Gazette, 65., 1918, p. 231. — 5453 Amphigena. Maculis nullis, mycelio albe, Meliolae et folio arcte adpresso; peritheciis minutissimis 50-60  $\mu$  cr., hyalinis, apice pilosis, pilis 15  $\mu$  long.; ascis e ovatis ellipsoideis, obtusis stipitatis, 40-45  $\approx$  11-14; sporidiis oblique 1-seriatis, uniseptatis, hyalinis, linearibus, acutis,  $24-28 \approx 3-4$ .

Hab. in foliis Caseariae silvestris (Flacourtiaceae), parasitica Meliolae Paulliniae St. (Fungi) et socia cum Fusario, Mayaguez, Porto Rico.

3. Nectria Albizziae Woronichin,? Ann. Horto Bot. Tiflis, 1920, Extr. 5454 p. 20, fig. 7. — Stromatibus pulviniformibus, erumpentibus, pallide testaceis; peritheciis caespitosis, ceraceo-mollibus, levibus, 5-30 in quoque stromate, sphaeroideis, papillatis, 200-235 μ diam.; ascis cylindraceis, apice leviter attenuatis, breviter pedicellatis, 44-49,5 × 6-6,6; sporidiis elongato-ellipsoideis, hyalinis, uniseptatis, monovel distichis, 9,9-11,6 × 3-3,3.

Hab. in ramis subvivis Albizziae Julibrissin Boiss. (Leguminosae), Caucasus, distr. Batum, pr. Tshakva, Asia occ. (SereBRJAKOV).

4. Nectria sordescens Sacc., Notae Myc. XXIII p. 69 (Accad. Veneto- 5455 trent. 1917). — Peritheciis in acervulos minutos 0,5-1 mm. latos

gregarios 6-10 confertis, globosis, breviter papillatis non collabentibus, extus sordide fusco-purpureis, non omnino levigatis; contextu parenchymatico rubro; ascis tereti-fusoideis, apice obtusulis lumineque 2-foveolatis, 60 × 6, octosporis; paraphysibus cylindraceis spuriis (ascis inevolutis?); sporidiis distichis oblongis, apice rotundioribus, 1 septatis, non constrictis, 11,5-12 × 4,5, obsolete 2-4-guttulatis, hyalinis.

Hab. in ramis emortais Leucaenae glaucae (Leguminosae), Los Baños, Ins. Philipp. (M. B. RAIMUNDO, comm. BAKER).

5. Nectria portoricensis F. L. Stevens, Bot. Gazette, 65., 1918, p. 231.— 5456 Coloniis subcircularibus 3-7 mm. diam., albis, centro fertilibus peritheciferis extus sterilibus, mycelio parasitico albo effuso copioso; peritheciis rubris, parvis, levibus, 160  $\mu$  cr.; ascis obovatis, obtusis, 25.36  $\approx$  8; sporidiis oblique monostichis, oblongis, hyalinis, v. e pallidis chlorinis, uniseptatis, obtusis,  $12 \approx 3$ .

Hab. in foiiis Banisteriae laurifoliae (Malpighiaceae), parasitica Meliolae rectangularis (Fungi), Jayuya, Porto Bico.

6. Nectria viridula Pat., Bull. Soc. Mycol. de Fr., 1913, p. 224. — Peritheciis plerumque 2.5 in stromate minuto aggregatis, globosis <sup>1</sup>/<sub>4</sub>-<sup>1</sup>/<sub>3</sub> mm. diam., ostiolo depressis, carnosis, flavo-viridibus, pruina aureo-virescenti tectis, rimosulis sed non villosis, pruina secedenti ochraceis; contextu parenchymatico e cellulis angulosis 15 μ circ. cr., flavidis; ascis octosporis 40.60 × 5.6, aparaphysatis; sporidis navicularibus, levibus, hyalinis, uniseptatis, saepe quadriguttulatis 13-15 × 5.6.

Hab. in cortice Syringae japonicae (Oleaceae), Chi Nè, Tonkin Cina, Asia (Duport).— Species minuta N. chlorellae et N. chrysites proxima.

7. Nectria Orchidearum Theissen, Ann. Mycol. 1X, 1911, p. 48, tab. VI 5458 fig. 65. — Peritheciis sparsis, botryose aggregatis v. solitariis, globosis, subapplanatis, fusco-aurantiacis, papilla concolore vix perspicua 200-250 μ diam., floccosula, ostiolo pertusulis; ascis cylindraceis, breviter pedicellatis, supra rotundatis, p. sp. 52-60 × 5-6; sporis oblique monostichis v. subdistichis, hyalinis, oblongis v. ellipsoideis, utrinque angustato-rotundatis, medio non constrictis, utraque cellula biguttulata, 10 × 4.

Hab. in pedunculo Orchidace a e epiphytae ignotae, São Leopoldo Rio Grande do Sul, Brasiliae (RICK).— Teste Rehm Nectriae Pandani Tul. affinis.

8. Nectria fusco-purpurea Wakefield, Bull. Misc. Inform. Kew 1918, 5459

p. 232.— Stromatibus dilute lateritiis, ceraceis, applanatis, 4-8 mm. long. 1-2 mm. latis, per rimas transversas corticis erumpentibus, primo conidia gerentibus; conidiis cylindraceis, utrinque obtusis vix curvulis 8-11  $\times$  2-2,5; conidiophoris simplicibus v. ramosis hyalinis 1,5-2  $\mu$  diam. Peritheciis dense constipatis compressione laterali deformibus, stromatibus obscuratis, sessilibus, fusco-purpureis, carnosulis, contextu parenchymatico rubro, sicco collapsis pezizoideis, rugulosis, 0,25 mm. diam., ostiolo minuto pertusis; ascis cylindraceis, octosporis, 80-90  $\times$  10-12; paraphysibus filiformibus, ramosis, hyalinis, 1,5  $\mu$  diam.; sporis monostichis v. subdistichis, variabilibus oblongis, utrinque obtusis, medio 1-septatis, interdum 2-3 septatis, ad septa constrictis, 14-33  $\times$  4,5-8,5.

Hab. ad ramos emortuos Pruni domesticae (Rosaceae) cultae (« Pond's Seedling »), Wisbech, Anglia (J. C. F. FRYER, A. D. COTTON).

9. Nectria Jodinae Speg., Mycet. Argent. VI, Anal. Mus. Nac. Buenos 5460 Aires, XXIII, p. 74 (1912). — Peritheciis hinc inde gregariis vel caespitosis in stromatibus vetustis Tuberculariae Jodinae Speg., udis globosis, siccis eximie cupulato-collapsis, 200 μ diam., membranaceis, primo albo-farinosulis dein nudis succineis, contextu parenchymatico melleo, circa ostiolum minore ac fuscescente; ascis cylindraceis, apice obtuse rotundatis, basi breviter pedicellatis, 80-100 × 10-15, aparaphysatis vel pseudoparaphysibus parcissimis commixtis; sporidiis oblique monostichis, ellipsoideo-cylindraceis, utrinque obtuse rotundatis, medio septatis, vix constrictis, hyalinis, 14-16 × 6-7, loculis grosse 1-guttatis.

Hab. in ramis dejectis putrescentibus Jodinae rhombifoliae (Santalaceae), in horto La Plata, Argentina.

10. Nectria badia A. Maublanc, Bull. Soc. Mycol. de Fr., XXXVI, 1920, 5461 p. 35, tab. II fig. 12-17. — Mycelio in stromatibus vetustis Phyllachorae subintermediae evoluto, ex hyphis dense aggregatis formato; stromatibus erumpentibus, exsertis, pulvinatis, minutis, 0,5-1,5 mm. diam., badiis, textura coriaceo-carnosa, hyphis parallelis; peritheciis subsuperficialibus, concoloribus, sphaeroideis, gregariis, minutis (circ. 150 μ diam.), sicco collabescentibus, apice pertusis, superficie pilis hyalinis, brevibus, velutinis, contextu minute celluloso; ascis clavatis v. subfusoideis, fere sessilibus, obtusis, diffluentibus, 55·70 × 12-16,8-sporis; sporidiis distichis v. fere conglobatis, oblongis v. fusoideo-clavatove oblongis, utrinque attenuato-obtusis, medio v. prope medium 1-septatis, leniter constrictis, hyalinis, 20-

 $30 \approx 4.5 \cdot 7$ ; acervulis conidiophoris in eisdem stromatibus evolutis, subcupulatis, albidis; conidiis fusoideo oblongis, rectis, obtusiusculis, hyalinis, continuis, dein medio 1 septatis, non constrictis,  $15 \cdot 25 \approx 3.5 \cdot 4$ , in basidiis acicularibus, simplicibus, usque ad  $100~\mu$  longis,  $1.5 \cdot 2~\mu$  crassis, densis acrogenis.

Hab. in foliis Sapindaceae cujusdam, Niteroy, Brasiliae (Herb. Mus. R. JAN).

11. Nectria Cainitonis P. Henn., Hedw., vol. 48. (1908) p. 104. — Peri- 5462 theciis caespitose erumpentibus, subglobosis, cinnabarinis, granulatoverrucosis, 180-200 μ diam., obtuse papillatis; ascis clavatis, obtusis, octosporis, 60-70 × 8-11; sporidiis monostichis vel subdistichis, ovoideis vel subfusoideis, utrinque obtusis, medio 1-septatis, 2-4-guttulatis, hyalinis, 10-18 × 4-5.

Hab. in corticibus Lucumae Cainitonis (Sapotaceae), hort. botan. Goeldi, Parà, Brasiliae (BAKER).

12. Nectria inventa Pethybridge, Trans. Brit. Mycol. Soc. 6., P. II, 5463 1918, p. 107, tab. III, fig. 1-5. — Peritheciis gregariis, globosis, atro-rufis, superiore parte pilosis, 300-500  $\mu$  diam., paraphysibus filiformibus dein obsoletis,  $150 \times 3-4$ ; ascis cylindricis, vel cylindraceo-clavatis,  $60-100 \times 4-6$ , octosporis; sporidiis monostichis, oblongis, hyalinis, 1-septatis,  $9-10 \times 4-5$ .

Hab. in tuberibus putresc. Solani tuberosi (Solanaceae), in Hirbernia. — Status conid. sistit Verticillii cinnabarini R. et B. (Acrostalagmi cinnabarini Corda).

13. Nectria cinnabarina Fr. — Syll. II, p. 479 — var. effusa Theissen, 5464 Ann. Mycol. IX, 1911, p. 52, tab. VII fig. 74. — Stroma late effusum cinnabarinum; peritheciis 300-400 μ diam. globosis, minute papillatis, arcte aggregatis; ascis 80-100 × 8-12 cylindraceis, hinc inde ventricose dilatatis; sporidiis monostichis v. imbricate distichis, oblongis, 18-24 × 7-8,5, longitudinaliter striatis, utrinque rotundatis, non v. vix constrictis, paraphysibus ramosis, guttatis, 2-2,5 μ crassis.

Hab. in cortice cuijusdam, Rio Grande do Sul, Brasiliae (RICK).— A typo differt stromatibus horizontaliter effusis, colore vividiore sporisque majoribus. — var. Daphnes Rehm, Ann. Mycol. XIII, 1915, p. 2.

Hab. ad Daphnem Mezeream emortuam (Thymeleaceae), Ruckberg prope Renbendorf-Rhön, Franconiae (ADE).

Nectria coccinea (Pers.) Fr. — Syll. II p. 481. — var. sordidula 5465
 Sacc., Notae Mycol. XXII p. 190 (R. Accad. Pad. 1917). Distinguitur

peritheciis sordide coccineis, saepe collabescentibus, modo caespitulosis, modo subsparsis; ascis 38.40 × 9.10; sporidiis oblongis, leviter constrictis, 10-12,6 × 3.4, hyalinis, (hine quam in typo paullo angustioribus; nec 2 guttatis visis).

Hab. in corticibus subvivis, Filfil, Erythraea, Africae.

15. Nectria flavido-carnea Rehm, Ascom. Philippin. VII, in Leafit. of 5466 Philippin. Bot. VIII, 1916, p. 2922. — Perithecia 20 botryose arcte congregata in acervulis 1-2 mm. latis, superficialia, globulosa, 0, 15-0,2 mm. lata, citrino-flavida, glabra, minutissime papillulata, ad basim hyphis hyalinis, 30-100 × 3 obsessa, sicca collabentia, dilute carneola, albido pruinosa. Ascis cylindraceo-clavatis, circa 80 × 15 8-sporis; sporis oblongis utrinque obtusis, medio septatis non constrictis, utraque cellula magnigutata, 20 × 8, 1-3-stichis. Paraphysibus nullis. Ad basim conidia sporarum formae 8 × 4,5 in hyphis brevibus.

Hab. ad sarmentum emortuum, Los Baños, Ins. Philipp. (C. F. BAKER). — Nectriae pityrodes Mont. proxima.

16. Nectria conferta Syd., Engler Bot. Jahrbüch. 54., 1916, p. 255.— 5467 Peritheciis in tumoribus matricis minutis dense confertis, stromate nullo, superficialibus, cinnabarinis, in sicco collapsis, globulosis, 160 200 μ diam., glabris. levibus, ubique parenchymatice ex cellulis angulato-globosis vel ellipsoideis 15-20 μ longis 10-15 μ latis, tenue tunicatis (membrana 1,5-2 μ crassa) compositis, pariete ca. 20 μ crasso, vertice papilla hyalina distincte radiato-fibrosa humili ca. 25 μ alta et 35-40 μ lata praeditis, basi hyphis paucis tenuibus suffultis; ascis clavatis, tenue tunicatis, sessilibus, filiformiter paraphysatis, 32-45 × 9-12, octosporis; sporidiis oblique monostichis vel pro parte distichis, ellipsoideis vel oblongo ellipsoideis, utrinque obtuse attenuatis, saepe etiam vix attenuatis, medio distincte septatis non constrictis, hyalinis, tenuissime striatis, 10-12 × 5-6.

Hab. ad corticem emort. arboris cujusdam, prope Sepik, Nova Guinea Nord-or., Africae (LEDERMANN).

17. Nectria gallifera Pat., Bull. Mycol. de Fr., 1913, p. 225. — Stro-5468 mate minuto e cortice erumpente, duro, perithecis 2-8-aggregatis efformato; peritheciis globosis basi attenuatis v. turbinatis, convexis, papillato-ostiolatis dein collabescentibus et cupuliformibus, laxe obtuseque asperulo-rugosis, pallide carneis, stromate obscuriore quandoque brunnescenti; nucleo rubro; ascis longe stipitatis, octosporis; sporidiis pallide roseis, levibus rectis v. curvatis, uniseptatis, septo vix constrictulis, magnis, 22-27 × 8-10; trama e cel-

lulis carneis, angulosis circ. 10 µ diam. efformata.

Hab. ad cortices emortuas, Chi Nè, Tonkin Cina, Asia (DUPORT). — Perithecia saepe plus minus abnormiter galliformiter inflata animalculorum ope quorundorum.

18. Nectria striatula H. S. Yates, Philipp. Journ. Sc. XII (1917) p. 5469 373.—Stromatibus corticalibus, sanguineis, suborbicularibus, erumpentibus, 0,5-1 mm. diam., contextu aurantiaceis, parenchymaticis; peritheciis 3-12 in quoque stromate, subglobosis 150-300 μ diam., ostiolis papillatis; ascis cylindraceis, 100 × 8, octosporis, evanescentibus, aparaphysatis; sporis monostich's, ellipsoideis, utrinque obtusis, ad medium 1-septatis, non constrictis, olivaceis, membrana longitudinaliter striolata praeditis.

Hab. in trunco emortuo speciei indeterminatae, in silvis pr. Sangirin Alabat, Ins. Philipp. (MERRILL).

#### II. Dialonectria

19. Nectria homba T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. Pe- 5470 radeniya v. 7., P. II, 1920, p. 127.—Peritheciis sparsis v. confertis stromate destitutis, rubro, latericiis, opacis minutissime rugosulis, quandoque minutissime flavo-granulatis; ostiolo conoideo in area rubra insidenti, demum nigrescenti; parietibus crassis pseudoparenchymaticis et e cellulis infra usque 12 μ diam. supra plus minus obscuris et opacis; aseis primum subcylindraceis apice truncatis, circ. 80 × 8, octosporis; ascis et paraphysibus mox diffluentibus subgelatinosis; sporidiis oblique monostichis e ovoideis cymbiformibus leniter v. non constrictis, apicibus obtusis, 10-16 × 4,5-6.

Hab. ad truncum emortuum Heveae (Euphorbiaceae), Peradeniya Ceylon, Asia.

20. Nectria calonectricola P. Henn., Hedw, vol. 48. (1908) p. 195. — 5471 Peritheciis sparsis vel gregariis, in caespitulis Calonectriae parasiticis, ovoideis vel subglobosis, cinnabarinis, papillatis, 170-200  $\mu$  diam.; ascis cylindraceo-clavatis, obtusis, octosporis,  $55.60 \times 5.7$ ; sporidiis oblique monostichis vel subdistichis, ellipsoideis, utrinque rotundatis, 1-septatis, hyalinis,  $8-12 \times 4-5$ .

Hab. in Calonectria (Fungi) ad Hibiscum schizopetalum (Malvaceae), hort, botan, Goeldi, Parà, Brasilia (BAKER).

21. Nectria perpusilla Sacc., Ann. Mycol. XI, 1913, p. 546. — Parasi-5472 tica, perexigua: peritheciis globoso-conoideis, 70-80 μ lat., 84-90 μ alt., sordide roseis, glabris, ostiolo non emergente, periphysato praeditis, basi hyphulis mycelialibus cinctis; contextu tenerrimo,

laxe parenchymatico; ascis rosulatis, fusoideis,  $40 \times 14$ , sensim brevissime pedicellatis, octosporis, apice rotundatis; sporidiis distichis, medio subtristichis, tereti oblongis, utrinque rotundatis, rectis, levibus,  $11-12 \times 3$ , hyalinis.

Hab. parasitice in thallo Meliolae clavulatae (Fungi), ad folia I p omo e a e sp. (Convolvulaceae), Oaxaca, Mexico (Bonansea).

22. Nectria Meliolae (Syd.) Saccardo, Epinectria (n. gen.) Meliolae Syd., 5473 Ann. Mycol. 15., 1917, p. 215. — In mycelio Meliolae parasitica; mycelium parce evolutum, ex hyphis hyalinis usque pallide flavidulis subflexuosis 2-4 μ crassis remote septatis compositum; perithecia plerumque gregaria, sed discreta globosa, 90-140 μ diam., superficie (mox parce mox copiosius) hyphis subhyalinis brevibus obtusis 3-4 μ crassis obsessa, primitus hyalino-flavidula, dein succinea, poro minuto aegre perspicuo, pariete ca. 10 μ crasso irregulariter parenchymatice contexta, paraphyses genuinae nullae; asci sessiles subfusoidei vel cylindracei, 25-30 × 5-7, octospori; sporae plerumque oblique monostichae, cylindraceae vel oblongae, utrinque obtusae, hyalinae, medio septatae, non constrictae, 9-10 × 1,5-2.

Hab. parasitica in mycelio Meliolae, aff. M. substenosporae, (Fungi), ad folia graminis cujusdam, Sorsegon, Luzon, Ins. Philipp. (M. RAMOS).

23. Nectria poricola Theissen, Ann. Mycol. IX, 1911, p. 53. — Peritheciis solitariis, ad os tubulorum Poriae vetustae nidulantibus, aurantiacis, globosis, circ. 240 μ diam., leniter floccosulis, poro imperspicuo; ascis cylindraceis, breviter pedicellatis, 80-90 × 6-7; sporidiis hyalinis, monostichis, ellipsoideo-oblongis, utrinque angustatis, non constrictis, episporio distincte verrucoso, 15-18 × 5-6, rectis v. subinaequilateralibus.

Hab. in hymenio Poriae sp. (Fungi), vetustae, Rio Grande do Sul. Brasiliae.

24. Nectria discoidea T. Petch, Hypocr. zeyl. in Ann. R. Bot.-Gard. 5475 Peradeniya v. 7., P. II, 1920, p. 126. — Peritheciis sparsis superficialibus, pallide brunneis, opacis collabescentibus et demum discoideis, 0,2 mm. diam., centro depressis levibus; parietibus tennibus pseudoparenchymaticis et e cellulis usque 12 μ latis crasse tunicatis, luce trasmissa pallide brunneis, ostiolo non prominenti; ascis clavatis, octosporis, 35-45 × 6-8; sporidiis oblique monostichis v. distichis, hyalinis anguste ovoideis, utrinque obtusis, 1-septatis septo non constrictis, levibus, 10-14 × 3,5-4.

Hab. ad Xylariam (Fungi) vetustam, Hakgala Ceylon, Asia.
25. Nectria lecanodes Ces. — Syll. II p. 499 — var. euryspora Vouaux, 5476
Bull. Soc. Mycol. de Fr., 1912, p. 188. — Peritheciis magis sphaeroideis quam in typo, non collabescentibus; ascis 60-70 × 9-10, octosporis; sporidiis monostichis latioribus quam in typo, 10-12 × 6-7, grosse biguttulatis.

Hab. in Pannaria plumbea (Lichenes), Mons Hèrault, Gallia (A. DE CROZALS).

- 26. Nectria Spegazzinii Vouaux, Bull. Soc. Mycol. de Fr., 1912, p. 189.— 5477 Ita dicatur Nectria lichenicola Spegazzini, non N. lichenicola (Ces.) Sacc., Syll. II p. 498.
- 27. Nectria Verrucariae Vouaux, Bull. Soc. Mycol. de Fr., 1912, p. 186.— 5478
  Peritheciis sparsis v. subgregariis thallo omnino immersis vix prominulis rubro-aurantiacis, papillula minuta mox nigrescente auctis, sphaeroideis 150-200 μ diam., ostiolo periphysibus rectis brevibus septatis praedito; contextu crasso, cellulis aurantiacis parum distinctis guttulis oleosis aurantiacis farctis; ascis cylindraceo-fusoideis, utrinque fortiter acutatis, basi breviter nodulosis, plerumque oblique tetrasporis saepe etiam bisporis, rarissime esasporis, 59-62 × 9-11; paraphysibus bifurcatis pluriguttalatis mox evanidis; sporidiis oblongo-fusoideis, utrinque attenuatis sed obtusis, saepe inaequilateris, hyalinis, 1-septato-constrictulis, quadri- v. biguttulatis 17-20,5 × 7

Hab. in thallo Verrucariae integrae (Lichenes), ad saxa calcaria, Dunkerque, Gallia bor. (BOULY DE LESDAIN).

28. Nectria variabilis Hara, Bot. Mag. Tokyo v. 28., 1914, n. 332, cum 5479 icon. — Sporodochiis irregulariter errumpentibus, rubro-aurantiacis v. roseis, plerumque 1-2 (raro 3) 0,5-1 mm. diam.; conidiophoris filiformibus, septatis, basi ramosis, 2,5-3 μ cr.; sporis fusariformibus, hyalinis, 3-5-septatis, 60-70 × 5-6; paraphysibus filiformibus, hyalinis, septatis, 2-2,5 μ cr.; peritheciis stromaticis v. basi sporodochiorum ortis, globosis v. ellipsoideis, ostiolo papillato praeditis, solitariis v. caespitosis, levibus, carneis, membranaceis, rubro-aurantiacis, 270-300 μ diam.; ascis cylindraceo-clavatis, apice rotundatis, stipitatis, octosporis, 130-150 × 11-13; sporis monostichis, fusoideis v. ellipsoideis, 1-septatis, septo non v. leniter constrictis, 16-22 × 6-9, hyalinis v. flavis; paraphysibus filiformibus 1-1,5 μ cr.

Hab. in Coccidiis (Insecta) Sasam paniculatam (Graminaceae) infestantibus, Kawauye-mura, pr. Mino, Japonia.

29. Nectria Leucaenae Rehm, Ascom. Philippin. VII, in Leafit. of Phi- 5480

lippin. Bot. VIII, 1916 p. 2923. — Perithecia gregaria, plerumque in maculis epidermidis albidulis sessilia, globulosa, glabra, minutissime papillulata, demum umbilicata, 0,2 mm. lata, ferrugineorubra, parenchymatice contexta, cellulis-20  $\mu$  latis; ascis cylindraceo-clavatis,  $70 \times 10$ -12, 8-sporis; sporis ellipsoideis, medio septatis, non constrictis, hyalinis,  $10 \times 5$ , 2-stichis; paraphysibus nullis.

Hab. ad emortuam Leucaen am glaucam (Leguminosae), Los Baños, Ins. Philipp. (M. B. RAIMUNDO). — Nectriae Bulbophylli P. Henn. proxima.

30. Nectria flageoletiana Sacc., Notae Mycol. XXII (R. Acc. Pad.) 1917, 5481 p. 161. — Peritheciis hinc inde dense gregariis, superficialibus, globoso-depressis, umbilicatis (Pezizellae ad instar) glabris, levibus, nitidulis, amoene dilute roseis, centro paullo saturatioribus, 400 μ diam., carnosulis; contextu parenchymatico dilute flavido-roseo; ostiolo exiguo, impresso; ascis fusoideis, basi breviter tenuatis, apice summo obtusulis, lumineque bifoveolatis, obsolete paraphysatis, octosporis, 55 58 × 4.7-5; sporidiis oblique monostichis v. subdistichis, breviter fusoideis, rectis curvulisve utrinque obtusulis, medio obsolete 1-septatis, non constrictis.

Hab. in ramulis corticatis Pruni Laurocerasi (Rosaceae) emortuis, Rigny, Gallia (Flageolet).—Socia adest commixta forma Turberculariae granulatae Pers. quae sine dubio st. conidicum ejusdem sistit.

31. Nectria Theobromae Massee, Bull. Bot. Garden Kew. 1908, p. 5482 218. — Peritheciis gregariis vel sparsis, superficialibus, ovatis, 0,5 mm. altis, levibus, glabris, aurantiaco-rubescentibus, ostiolo minuto vix prominulo hiante; ascis cylindraceis, pedicellatis, octosporis; paraphysibus septatis, ascos excedentibus, hyalinis, apice vix incrassatis, interdum flexuosis, 3 μ cr.; sporidiis oblique monostichis, hyalinis, ellipsoideis, 1-septatis, ad septum subconstrictis, 28-30 × 8-10.

Hab. in areis sanguinulentis corticis Thebromae Cacao (Sterculiaceae), Grenada, Indiae occid. (Howard). — A N. Bainii Mass. facile distincta.

32. Nectria cancri Rutgers, Ann. Jard. Bot. Buitenz. 1913, p. 2 t. I 5483 p. 62, Hypomyces cancri (Rutg.) Wollenw., Journ. Agric. research II p. 271 t. XIII f. J. et XV f. B. C. — Peritheciis gregariis globulosis asperis vertice conicis levibus, 350-450 μ altis, 275-375 μ cr.; sporidiis 10-15 \* 5-6,7; conidiis (Fusarium) 3-septatis 30-45-3,7-5; rarius 4-5-septatis 30-55 \* 3,7-5,5.

Hab. in cortice canceroso Theobromae Cacao (Sterculiaceae), Java, et radicibus Cannabidis sativae (Moraceae), in Amer. bor. — Diagnosis imperfecta ex Wollenweber. — Affinis dicitur Nectr. Ipomoeae Hals.

33. Nectria pyrosphaera Maire, Bull. Soc. H. N. de l'Afrique du Nord 5484 VIII, 1917, p. 80, fig. 4.— Peritheciis sparsis v. gregariis, semper discretis, sphaericis, 350-550 μ diam., levibus, glabris, aurantio-rubris, contextu pseudoparenchymatico, ostiolo papıllato punctiformi, albido vix conspicuo, nucleo cirrisque albis; ascis 8-sporis, cylindraceis, subsessilibus, 75-110 × 7-9, paraphysibus nullis; sporidiis oblique monostichis, hyalinis, ellipsoideis, longitudinaliter striatis, medio septatis, ad septum non constrictis, 10-14 × 5-6, loculis 1-guttulatis; conidiophoris (in culturis evolutis) aeremoniiformibus, laxis, basi septatis, subulatis, 30-80 × 2.5-3; conidiis solitarie acrogenis, oblongo-ellipsoideis, hyalinis levibus, subinaequilateris, 6-8 × 3-3,5.

Hab. in ligno putri Ulmi campestris (Ulmaceae) et Populi albae (Salicaceae), in Mauretania (Algeria). — Peritheciis perfecte sphaericis igneis (unde nomen) notabilis species.

34. Nectria Berkeleyi v. Höhn., Fragm. z. Mykol. 733, Stzsb. Akad. 5485 Wiss. Wien CXXI, 1, p. 355 (1912). — Hypostromate tenui, pallido, minute pseudoparenchymatico, erumpente; peritheciis singulis vel paucis, vel etiam 5-20 botryose acervatis, siccis rubro-ochraceis vel pallide incarnatis, globosis, non collabentibus vel in centro umbilicatis, 400-500 μ latis, ostiolo minuto subapplanato 28 μ lato, circumcirca verrucis acutiusculis 60 μ altis et 100 μ latis asperato, excipulo 60 μ crasso, bistratoso; ascis clavatis, sessilibus, aparaphysatis, octosporis, 90 × 20; sporidiis ellipsoideo-oblongis, inaequilateris, utrinque rotundatis, ad septum non constrictis, 22-30 × 8-9,5.

Hab. in corticious, Ceylon (Berk. et Br. Fungi of Ceylon, n. 1027 sub N. pityrodes Mont.) — N. Ralfsii Bk. et Br. affinis.

35. Nectria Lesdaini Vouaux, Bull. Soc. Bot. Fr. LIX (1912) p. 15. — 5486 Peritheciis fere superficialibus, sparsis, pulchre rubris, distincte piriformibus, 120-230 μ latis, 200-350 μ altis, ostiolo simplici pertusis, contextu tenui pseudoparenchymatico, interdum senescendo nigrescentibus et collabescentibus; ascis cylindraceis, breviter stipitatis, octosporis, 75-90 × 5-6, paraphysibus brevibus, simplicibus vel furcatis, parce septatis, facile diffluentibus; sporidiis monostichis, ellipsoideis vel ovatis, hyalinis, 1-septatis, non vel vix constrictis, 9-10 × 3,5-5.

Mr.

Hab. in membrana, « linoleo » dicto, Versailles, Gallia. — A N. charticola (Fuck.) peritheciis fere superficialibus nec non sporidiis multo minoribus differt.

36. Nectria polita Theissen, Ann. Mycol. IX, 1911, p. 53, tab. V fig. 5487 21, VI fig. 56-57. — Peritheciis laxe gregariis, globoso-piriformibus, circ. 300-380  $\mu$  diam., laete rubris, glaberrimis, vertice late conico, circa ostiolum zona obscure brunnea nitenti pulchre cinctis; ascis cylindraceis, dilutissimis, breviter pedicellatis, supra rotundatis, p. sp. 65-72  $\times$  8-9,5; sporis monostichis, hyalinis, ellipsoideis, rotundatis, episporio minutissime verruculoso,  $10\cdot12\times5$ , medio non constrictis,

Hab. in ramis nodosis plantae ignotae, Rio Grande do Sul, Brasiliae. — Species superficie fere artificiose polita, pulchre dichroa, vertice nitenti distincta. Externis similis N. striatosporae Zimm. peritheciis tamen glaberrimis sporisque recedens.

37. Nectria Peziza (Tode) Fr.—Sacc. Syll. Fung. II p. 501.—Subsp. 5488 reyesiana Sacc., Ann. Mycol. XII, 1914, p. 305.—Peritheciis gregariis, globoso-discoideis, carneis, 175-190 μ diam., hyphis byssinis albis cinctis, junioribus minoribus et tantum depressis, maturis umbilicato-concavis, centro papillatis; ascis cylindraceis apice rotundatis, bifoveolatis, 50 60 × 6, octosporis, subsessilibus, paraphysibus obsoletis; sporidiis oblique monostichis, elliptico-ovoideis, 9-10 × 4,5, 1-septatis vix constrictis, hyalinis.

Hab. ad corticem emortuum indeterm., Los Baños, Luzon, Ins. Philippin. (S. A. REYES).

38. Nectria innata Theissen, Ann. Mycol. IX, 1911, p. 50, tab. V fig. 5489
13, VI fig. 60. — Peritheciis solitariis v. paucis (2-5) stromatice junctis, prorumpentibus, basi semper innatis, globoso-piriformibus 400-500 μ diam., primo rubro-ferrugineis, mox brunneo-rubris, asperulis, vertice subapplanatis, annulo tumidulo atro-sanguineo cinetis, ostiolo pertusis; ascis ventricoso-elongatis, breviter pedicellatis, supra late rotundatis, p. sp. 100-115 × 20-25; sporis monostichis v. distichis, hyalinis, ellipsoideis, utrinque rotundatis, leniter inaequilateralibus v. curvulis, medio non v. vix constrictis, plerunque irregulariter guttatis, typice guttis dnabus grossis globosis praeditis, 30-38 × 12-14.

Hab. ad lignum corticatum, Sao Leopoldo, Rio Grande do Sul, Brasiliae (RICK).

39. Nectria confusa v. Höhn., Fragm. zur Mykol. 753, in Sitzgsb. Akad. 5490 Wiss. Wien CXXI, 1, p. 372 (1912). — Hypostromate tenui, pallido,

minute parenchymatico, sub peridermio effuso; peritheciis singulis vel paucis, saepe dense seriatis vel in acervulos 12 mm. latis, planis congestis, albidulis vel luteolis (in sicco) irregulariter lobatotuberculosis vel plerumque lobis 3-5 rotundatis, 120  $\mu$  circ. latis et longis, circa ostiolum applanatum. 30  $\mu$  circ. latum, regulariter ordinatis praeditis, 260  $\mu$  latis, ovoideis, excipulo bistratoso, 45  $\mu$  circ. crasso, superne protuberantiis 3-5 applanatis, 70-80  $\mu$  altis, 100-120  $\mu$  latis, inferne papillis verruciformibus praeditis; periphysibus in ostiolo copiosis, graeillimis; ascis clavatis, sessilibus, apice conoideo-attenuatis, 70-85  $\times$  12, aparaphysatis; sporidiis distichis, din continuis, demum tenuiter septatis, non constrictis, ellipsoideofusoideis, utrinque rotundato-attenuatis, 17-22  $\times$  7-8.

Hab. in corticions, Ceylon, Asia (THWAITES).

### III. Hyphonectria. - (Cfr. Nectriopsis Maire).

40. Nectria albofulta T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. 5491 Peradeniya v. 7., P. II, 1920, p. 128. — Peritheciis globosis v. late conoideis, sparsis v. in parvos greges dispositis e subiculo albobyssino bene evoluto ortis, minutis, 0,15 mm. diam., e rubro-flave-scentibus rubro-sanguineis, translucidis, minutissime rugosulis, ostiolo minuto conoideo praeditis; tunica perithecii tenui e cellulis latis efformata, cellulis externis quandoque longe conoideo prominentibus et usque 30 μ long.; ascis clavatis breviter pedicellatis octosporis, 45-50 × 7-8; sporidiis e anguste ovoideis subfusoideis 1-septatis septo leniter constrictis, utrinque obtusis, 9-11 × 3-4,5.

Hab, ad ramos emortuos Beloperones oblongatae (Acanthaceae), Peradeniya Ceylon, Asia.

41. Nectria sphaeriophi<sup>1</sup>a Theissen, Ann. Mycol. IX, 1911, p. 51, tab. 5492 V fig. 16, VII fig. 69. — Miniato-cinnabarina. Peritheciis stromate parco, late effuso junctis, arctissime congregatis, stratum compactum, continuum efformantibus, 120-170 μ diam., obsolete papillatis, minute verruculosis; ascis dilutissimis, tenuibus, modice pedicellatis, p. sp. 52-56 × 6-7; sporidiis oblongis, hyalinis, leviter curvatis medio septatis, non constrictis, utrinque rotundatis, cellula inferiore saepe paullo latiore, 15-16 × 3.

Hah. in ligno marcescenti parasitica ad stroma Sphaeriaceae (Fungi) cujusdam, Sao Leopoldo, Rio Grande do Sul, Brasilia (RICK). — Differt a N. episphaeria modo crescendi fabrica et modis sporarum; a N. punicea peritheciis minoribus, non pulvinatim aggregatis, obscurioribus.

42. Nectria sydowiana Theissen, Ann. Mycol. IX, 1911, p. 48, tab. V 5493 fig. 11-12. — Peritheciis sparsis, bysso tenui albido orbiculariter determinato insidentibus, globosis v doliiformibus, albido-fuscidulis, circ. 260 × 220-240, apice corona albida discoidea, plana, compactiuscula, ex hyphis hyalinis dense intricatis formata cincto, ostiolo pertusis; ascis cylindraceis 70-76 × 8-10 breviter pedicellatis; sporis distichis, flavidulis, fusoideis, utrinque acutatis, rectis v. curvulis, ad septum medium non constrictis, 32-48 × 4.

Hab. ad ramos Bambusae (Graminaceae), Sao Leopoldo, Rio Grande do Sul, Brasiliae (RICK). — Ob caracteribus sporarum Nec. abnormis P. Henn. et N. subfalcatae P. Henn. proxima sed peritheciis diversa.

43. Nectria tjibodensis Penz. et Sacc. — Syll. XIV p. 636 — var. Gli-5494 ricidiae Rehm, Ascom. Philippin. VII, in Leafit. of Philippin. Bot. VIII, 1916, p. 2922. — A typo differt peritheciis e mycelio albidulo subcorticali late expanso caespitose erumpentibus, flave fuscidulis, fusce papillulatis.

Hab. ad Gliricidiam sepium (Leguminosae), Los Baños, Ins. Philippin. (M. B. RAIMUNDO).

44. Nectria muscicola Sacc., Ann. Mycol. XI, 1913, p. 416. — Peritheciis sparsis, epiphyllis, perexiguis, 150-200 μ diam., carnosulis, globulosis, superficialibus, rubris, non papillatis, praeter areolam circularem planam, glabram albo-pilosulis, ostiolo rotundo (inclusis periphysibus 18-20 \* 2-3) 45-55 μ diam.; contextu ex cellulis tenerrimis parenchymaticis, parum distinctis formato; ascis cylindraceis, v. cylindraceo-clavatis, 70 \* 5,5-6,5, octosporis, non v. indistincte paraphysatis, deorsum modice tenuatis; sporidiis monostichis v. apice distichis ellipsoideo oblongulis, utrinque rotundatis, tenuiter 1-septatis, non vel vix constrictis, hyalinis, 8,5-9 \* 4,5-5.

Hab. in foliis subvivis Muscorum (Barbulae sp.), Mescia pr. Tripoli, Africa bor — Perithecii pili tereti-subclavati, continui, hyalini,  $40-50 \approx 2,5-3,5$ . A speciebus bryonhilis facile distinguenda; videtur parasitica.

45. Nectria Citri P. Henn., Hedw. vol. 48. (1908) p. 104.— Maculis mycelii cretaceis vel isabellinis; hyphis septatis, ramosis, 3-5 μ cr.,
hyalinis, conidiis falcatis, 40 80 × 5-7, 3-7-septatis, hyalinis (Fusarium); peritheciis gregariis, subglobosis, collabentibus, coccineis,
squamulosis, 170-200 μ diam.; ascis clavatis, obtusis, octosporis,
45-60 × 7-11; sporidiis oblique monostichis v. subdistichis, ellipsoideis, 2-guttulatis, 1-septatis, constrictiusculis, flavidulis, 11-14 × 5-7.

Hab. in corticibus Citri Aurantium (Rutaceae), hort. botan. Goeldi, Parà, Brasilia (BAKER).

46. Nectria Bainii Massee (1899) — Sacc. Syll. XVI p. 579. — Var. 5497 hypoleuca Sacc., Notae Mycol. XX, Nuovo Giorn. bot. it., N. S., 23., 1916, p. 205.— Subiculo late effuso albo v. albido, tomentoso, numquam flavo v. aurantiaco; cetera vix diversa; perithecia rarius senio leviter collabentia; sporidia 11-12 × 4,5, diu continua, dein 1-septata non constricta.

Hab. in fructibus junioribus, qui necantur Theobromae Cacao (Sterculiaceae), Los Baños, Ins. Philipp. — Socia adsunt Mycogone cervina y. Theobromae et Fusarium Theobromae App. et Strunk.

47. Nectria huberiana P. Henn., Hedw. vol. 48. (1908) p. 104. — My- 5498 celio maculiformi, flavo-pallescente, subcretaceo; peritheciis gregariis, subglobosis, rubris, levibus, 180-240 μ diam., ascis cylindraceo-clavatis, obtuse rotundatis, octosporis, 50-80 × 9-12; sporidiis oblique monostichis vel subdistichis, oblongo-ellipsoideis, utrinque obtusis, curvulis, granulatis, hyalinis, 1-septatis, 16-25 × 6-8.

Hab. in fructibus Theobromae longiflorae (Sterculiaceae), hort. bot. Goeldi, Parà, Brasiliae (HUBER).— Sporidiis majoribus obtusiusculis a N. Bainii Mass. et N. camerunense App. et Str. distincta sed eis similis et affinis.

### 1V. Lepido-lasionectria

48. Nectria chrysolepis Pat., Bull. Soc. Mycol. de Fr. 1913, p. 224.— 5499 Superficiali, stromate nullo, solitaria v. gregaria sed caespitosa; peritheciis globosis 300 μ circ. diam., rubro aurantiacis, verrucis subpyramidatis flavo-auratis tectis, dein aurantiacis, 60 μ circ. altis, e cellulis magnis 12-30 μ angulosis v. rotundatis efformatis, crasse tunicatis; contextu carnoso concolori grosse parenchymatico; ostiolo papilliformi; ascis octosporis, circ. 90 × 8; sporidiis ovoideis, obtusis, septo non v. parum constrictis, biguttulatis, levibus, 12 × 6.

Hab. in ligno denudato, Hanoi Tonkin Cina, Asia (DUPORT).
49. Nectria albicans Starb. — Syll. XVI p. 577 — Var. microspora 5500 Theiss., Ann. Mycol. IX, 1911, p. 48. — A typo recedit sporidis

minoribus,  $18-25 \approx 6,5-7$ .

Hab. in cortice arboris ignoti, Rio Grande do Sul, Brasiliae.
50. Nectria sulcispora T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. 5501
Peradeniya v. 7., P. II, 1920, p. 129 (Lasionectria). — Peritheciis sparsis, superficialibus, late conoideis, 0,2 mm. diam. 0,15 mm. altis non collabescentibus, ostiolo papillato et hyphis albis floccosis prae-

dito, obscure flavo-brunneis, parietibus pseudoparenchymaticis pallide brunneis ex cellulis parvis crasse tunicatis efformatis; ascis clavatis octosporis, 50-60 \* 10-12; sporidis oblique monostichis v. distichis, ovoideis, hyalinis 1 septatis non constrictis, oblique longitudinaliterque sulcatis, 10-13 × 4-6.

Hab. in Xylaria (Fungi), vetusta, Hakgala Ceylon, Asia.

### NEOHENNINGSIA Koord. - Syll. XXII p. 474.

1. Neohenningsia confluens T. Petch, Hypocr. zeyl. in R. Bot. Gard. 5502 Peradeniya v. 7., P. II, 1920, p. 130 et 114.—Peritheciis circ. 0,35 mm. diam., primum rubro-brunneis subtranslucidis demum ochraceis et opacis extus pruinosis, hyphis conoideo-fasciculatis usque 100 μ long., sparsis praeditis, demum deciduis, parietibus in stratu externo parum conspicuo et cellulis parvis efformato externo cellulis ratioribus; sporidiis 10-12 \* 5, cenuiter tunicatis.

Hab. in ramis emortuis, Ceylon, Asia. - N. suffultae proxima, cum qua antea confusa.

NEONECTRIA Wollenweber, Ann. Mycol. 15., 1917, p. 52. - Peritheciis contextu et forma fere Nectriae (sect. ex gr. Willkommiotes Wr., Phytopathology, 3., 1913, p. 226), singulis v. gregariis, laeto colore; sporidiis tenuibus Mycosphaerellae similibus ellipsoideis, 1-pluriseptatis; conidiis cylindraceis Ramulariam referentibus, chlamydosporis intercalaribus.

1. Neonectria Ramulariae Wollenw., l. c. - Stat. conidioph. ? Ramula- 5503 ria magnusiana (Sacc.) Lind. = Septocylindrium magnusianum Sacc. parasiticum in foliis Trientalis europeae. — Peritheciis solitariis v. in acervulos aggregatis, rubris, 200-300 × 170-250, ovoideis v. globosis; ascis 8-sporis; sporidiis coacervatis, ochroleucis, singulis hyalinis, tenuibus, typice ellipsoideis, 1-septatis, 12-15 » 3,2-4, rarius 11-20 \* 3-4,5, in statu germinanti 1-3-septatis.

Hab, in tumoribus heteroblasticis ramentorum Rubi fruticosi (Rosaceae), pr. Vohwinkel Rhenogoviae, Germania. - Nisi status conid. distinguat speciem, haec aegre distinguenda videtur. Typus Ramulariae est biophilus et foliicola ergo inepte ut specificum nomen Neonectriae seu Nectriae adhibitum. Aegre synonym. esse potest Fusarium obtusiusculum Sacc. (ut A. affirmat) saprophyticum in hibernaculis Nelumbii (P. A. Sacc. ms.).

SEPTOMAZZANTIA Theiss. et Syd., Ann. Mycol. 13., 1915, p. 193 et

- 668. Stroma cortice innatum superficie emergens. Perithecii immersi parietibus brunnescentibus fibrillosis mollibus limitati. Asci aparaphysati octospori. Sporidia hyalodidyma. Typus gen.:
- 1. Septomazzantia epitypha (Cooke) Theiss. et Syd. (= Phyllachora 5504 epitypha (Cooke) Sacc., Syll. II p. 605).
- 2. Septomazzantia bicchiana (De Not.) Theiss, et Syd. (= Microcyclus 5505 bicchianus (De Not.) Syd., Syll. XVII p. 845).

### IJUHYA Starb. - Syll. XVI p. 581.

ljuhýa vitrea Starb. — Syll. XVI p. 581 — var. javanica v. Höhn., 5506
 Fragm. zur Mykol. 762, in Stzgsb. Akad. Wiss. Wien, CXXI, 1,
 p. 380 (1912).

SPHAEROSTILBE Tul. — Syll. II p. 511, IV p. 972, XI p. 359, XVII p. 798, XXII p. 475.

1. Sphaerostilbe flammeola v. Höhnel, Fragm. z. Mykol. XVII N. 877 5507 p. 2 (50), Stzb. d. k. Ak. d. Wiss. Wien, Math.-naturw., Abt. I, 124 Bd. — Strasser, Verh. zool. bot. Ges. 69., 1919, p. 358.— Peritheciis piriformibus pallide rubris, solitariis v. aggregatis, parietibus tenuibus praeditis, basi hyphis hyalinis donatis, ostiolo pilis hyalinis simplicibus unilocularibus ornato; paraphysibus nullis v. indistinctis; ascis clayatis sessilibus, 80-100 × 14; sporidiis hyalinis bilocularibus plerumque ellipsoideis v. biconoideis, distincte constrictis, loculo superiore majore, 20-30 × 8-10.

Hab. in cortice exsiceata Clematidis Vitalbae (Banunculaceae), Austria. — Status conidicus Atractium flammeolum v. Höhn. — Proxima Sph. fuscae Fuck. et Sph. flammeae Tul.

2. Sphaerostilbe placenta Theissen, Ann. Mycol. IX, 1911, p. 55, tab. 5508 V fig. 10, VI fig. 30. — Stilbum subulatum, fuligineum, griseo viridulo-pruinatum, 1-1,5 mm. longum; stromatibus pyrenophoris applanato-placentiformibus, vix 0,5 mm. crassis, ambitu irregulariter orbicularibus, 1-3 mm. diam., gyroso-colliculosis, griseo albidis, ostiolis luteo-brunneis punctatis, aetate fuscescentibus et grosse nigro-punctatis; intus griseis, intense rubescentibus quando madefiunt; peritheciis sphaeroideis, 250 280 μ diam. v. piriformibus 280-360 ≈ 220-280, immersis, ostiolo vix cupulato-emergenti; ascis rectocylindraceis, pedicello brevi firmo, supra rotundato-truncatis, p. sp. 72-80 ≈ 6-8; sporis monostichis, hyalinis medio septatis non constrictis, ellipsoideis, utrinque rotundatis, episporio verrucoso, 10-13 ≈ 5-6; paraphysibus nullis.

Hab. in ligno corticato, Rio Grande do Sul, Brasiliae. - Differt a Sph. Henningsii Ferd. et Wing. stromatibus valde applanatis, sporis verrucosis, stilbo subulato nec globoso-capitato et colore.

VALSONECTRIA Spegazz. - Syll. II p. 579, XIV p. 645, XXII p. 483.

1. Valsonectria orbiculata Syd., Ann. Mycol. 14., 1916, p. 86. - Stro- 5509 matibus amphigenis, in circulos omnino orbiculares 3.5 mm. latos dense concentriceque dispositis, minutis, globoso-conicis, 350-450 µ diam., basi saepe confluentibus, matricem elevantibus et tandem disrumpentibus, demum vertice parum prominulis, profunde immersis, mesophyllum occupantibus, contextu carnoso ex hyphis crassinscule tunicatis crebre articulatis inferne byalinis superne griseobrunneolis composito; peritheciis paucis in quoque stromate, omnino immersis, 150-220 µ diam., ostiolis-longiusculis et crassiusculis fulvo-rubris erumpentibus, pariete tenui sed distincto fibroso; ascis cylindraceo-clavatis, aparaphysatis, 50-70 × 10-13, octosporis; sporidiis oblique monostichis usque distichis, oblongis, medio septatis, non constrictis, hyalinis, grosse 4 guttatis, 16-18 > 5-6, utrinque obtusis, loculo supero saepe crassiore; pycnidiis simul praesentibus cum sporis fusoideis rectis vel leniter curvatis utrinque attenuatis continuis hyalinis, 8-10 u longis et 2,5-3 u latis, sporophoris subulatis, 8-10 µ longis et 2-2,5 µ crassis suffultis.

Hab. in foliis vivis Myrsinaceae, Miliquabo Rio Cuquenan, Venezuela (E. ULE).

HYPOCREA Fr. - Syll. II p. 520, IX p. 972, XI p. 361, XIV p. 641, XVI p. 583, XVII p. 800, XXII p. 477.

1. Hypocrea brunnea T. Petch, Hypocr. zeyl. in Ann. R. bot. Gard. 5510 Peradeniya v. 7., P. II, 1920, p. 132. — Stromatibus circularibus, irregulariter pulvinatis usque 1,2 mm. diam. et 0,6 mm. alt., pallide uniformiter rubro-brunneis, globosis non translucidis, ostiolis non apparentibus, elevationibus perithecialibus distinctis, intus albis, fragilibus; peritheciis globosis 0,2 mm. diam.. parietibus hyalinis v. pallide flavescentibus; ascis 96 × 5; segmentibus sporarum globosis 3,5-5 µ diam. v. cuboideis et 4 × 3, spinulosis hyalinis, cirrhum album efformantibus.

Hab. in ligno emortuo, Hakgala Ceylon, Asia. - Hyp. discellae proxima sed ostiolis inconspicuis sporidiis majoribus etc. diversa.

2. Hypocrea chlorostoma T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard 5511 Peradeniya v. VII, P. II, 1920, p. 133. - Stromatibus discoideis

supra convexulis, aequalibus usque 4 mm. diam. et 0,5 mm. crassis, margine rotundatis, flavo-brunneis dein sordide brunneis ostiolis obscure virentibus praeditis, intus albo-flavescentibus non transucidis, aridis rugosis obscure rubro-brunneis, ostiolis non evidentibus, v. supra viridi-nigrescentibus infra rubro-brunneis, intus viridi-nigrescentibus; peritheciis globosis 0,1-0,15 mm. diam. v. ovoideis 0,18 mm. diam. 0,1 mm. altis; parietibus perithecii vivis flavo-virentibus, in speciminibus siccis flavo-brunneis; ascis 8-16 sporis, 60-64 × 4; sporidiis vivis pallide viridibus, vetustate viridi-nigricantibus, verrucosis, plerumque globosis, 3,5-4, nonnullis ovoideis 4 × 3.

Hab. ad ligna emortua, Peradeniya Ceylon, Asia.

3. Hypocrea extensa T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. Peradeniya v. 7., P. II, 1920, p. 132. — Stromatibus usque 1 cm. diam. v. irregulariter confluendo multo latioribus, planis tenuibus, 0,3 mm. circ. cr. pallide flavis, dense brunneo ostiolatis, globosis opacis aequalibus; margine definito non byssino arescendo incurvato, intus albis e flavo corticatis; peritheciis globosis usque 0,1 mm. diamv. ampullaceis, confertis, parietibus flavis praeditis; ascis 8-16-sporis, parte sporifera 42-56 × 3-4; segmentis sporarum globosis, hyalinis, minute verrucosis, 2,5-3 diam.

Hab. ad ramos emortuos, Peradeniya, Ceylon, Asia.

4. Hypocrea fulviseda Bresadola, Ann. Mycol. 18., 1920, p. 56. — Subiculum late effusum, obscure fulvum, ozonioideum, ex hyphis septatis, non nodosis, 5-8 μ crassis, compositum; stromatibus pezizoideis, breviter stipitatis, extus intusque albis, disco applanato vel subconcavo, orbiculari, 1-2 mm. lato, inferne sensim attenuato; stipite cylindraceo, in subiculo nidulante, albo, 1 mm. circiter longo, 1/3 mm. crasso; peritheciis immersis, subdistantibus, parvis, subglobosis, 150-160 μ, ostiolis conoideis vix prominulis et superficiem stromatis fulvello-punctatam efficientibus; contextu stromatis ex hyphis hyalinis, 3-4,5 μ crassis; ascis cylindraceis, 70-90 × 3-4; articulis sporidiorum truncato-quadrangularibus, 4 × 2, biguttulatis.

Hab. in cortice arbor. frond., S. Leopoldo, Brasiliae (RICK).

5. Hypocrea gigantea T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. 5514 Peradeniya v. VII, P. II, 1920 p. 131. — Stromatibus irregulariter globosis v. ovoideis usque 4 cm. long. 3 cm. latis et 3 cm. altis, lateraliter plicatis et infra breviter contractis, saepe aggregatis, quandoque pulvinatis et infra depresse plicatis, centro insertis, colore coriario v. rubro-coriario, glabris, opacis; ostiolo pallide brun-

neis, inconspicuis non prominentibus; intus albis, radiatim fibrillosis, stratu exteriore e contextu mox separabili; peritheciis in zona periphaerica distincta confertis, verticaliter ovoideis usque 0,4 mm. altis et 0,25 mm. diam., parietibus hyalinis; ascis cylindraceis  $70 \times 4$ , 8-16-sporis; segmentis sporarum globosis 3-4  $\mu$  diam. v. ovoideis et tunc 4-5  $\times$  3-3,5, hyalinis minute verrucosulis.

Hab. in Peradeniya, Henaratgoda, Waga, in ins. Ceylon, Asia.

6. Hypocrea japonica Yasuda Ats., Botan. Mag. Tokyo, 34., 1920, p. 5515 179, 3 fig. — Stroma centralis stipitiformis, supra pileiformi et irregulariter expansum carnosum centro depressum margine lobulatum, sicco 2,5-5 cm. altum, supra, 4,5-6 cm. latum, 0,5-1 cm. crassum; superficie inaequali undique ob peritheciorum ostiola nigropunctata, intus brunneo; stipite farcto cylindraceo 1,5-2,5 longo 1-1,5 cm. lato, levi, brunnescenti; peritheciis prope superficiem dense aggregatis et stratum simplicem efformantibus, ovoideis, 0,4-0,5 mm. long. 0,28-0,35 mm. latis; ascis cylindraceis infra angustatis apice rotundatis octosporis, 150-200 × 7-8; sporis monosticis, fusoideis, utrinque acutatis, bilocularibus hyalinis, levibus, 28-35 × 6-7; paraphysibus nullis.

Hab. ad terram pluribus locis, Japoniae. — Fungus comestibilis et vulgo ibuki-take vocato.

7. Hypocrea Petchii Trotter n. n., Hyp. mellea T. Petch, Hypocr. zeyl. 5516 in Ann. R. Bot. Gard. Peradeniya, v. VII, P. II, 1920, p. 133, nec Rehm. — Stromatibus subtranslucidis, pallide flavo-brunneis v. melleis et juventute brunneo ostiolatis, arescendo rubro-brunneis et ostiolis nigricantibus praeditis, pulvinatis usque 4 mm. diam., margine rotundatis, basi in parte centrali latiuscula insertis; superficie aequali, arescendo rugosa, juventute intus pallide flavis et carrosis, arescendo albo-flavescentibus et suberosis v. quandoque fragilibus; peritheciis plerumque verticaliter òvoideis usque 0,3 mm. alt. 0,1-0,15 mm. diam., quandoque globosis, 0,2 mm. diam., varia profunditate sitis, parietibus perithecialibus flavo-brunneis; ascis 65-75 × 4; segmentis sporidiorum ovoideis 5-6 × 4, v. globosis et 4-5 µ diam., spinulosis, flavis v. flavo-virentibus, massa sporidiorum exeunte flava.

Hab. Hakgala, Ceylon, Asia.

8. Hypocrea mellea Rehm, Ascomyc. Philipp. VI, Leaflets of Philipp. 5517 Botany, VI (1914) p. 2276. — Stromatibus sparsis, sessilibus, disciformi-orbicularibus, ad basim valde constrictis, 3 4 mm. latis, 1-1,5 altis, vix convexulis, margine tenuissimo levi cinctis, melleis, intus

albis; peritheciis monostiche innatis, globulosis, 150  $\mu$  latis, ostiolis punctiformibus vix conspicuis; aseis cylindraceis, aparaphysatis,  $60-70 \approx 4$ ; sporidiis monostichis, didymis, loculo superiore globoso, inferiore obtuse conoideo, mox secedentibus, hyalinis (mensura desunt).

Hab. in ramis deciduis decorticatis, Mt. Maquiling, prope Los Baños, ins. Philipp. (C. F. BAKER).

9. Hypocrea ambigua Theissen, Ann. Mycol. IX, 1911, p. 58, tab. VI 5518 fig. 62. — Stromatibus sparse gregariis e subiculo albo tenuissimo, orbiculari oriundis, hemisphaericis 0,5 mm. diam., annulo albo subiculi diu cinctis, fuscescentibus, ostiolis rubro-brunneis hemisphaerice prominulis; peritheciis immersis, subglobosis 132-170 μ diam.; ascis cylindraceis, supra rotundatis, brevissime pedicellatis, p. sp. 54 × 4; sporis viridulis, minutis, ellipsoideis, episporio minute verrucoso, medio vix constrictis, articulis hemisphaericis non secedentibus, 5,5 × 3,5.

Hab. in ramis corticatis, Rio Grande do Sul, Brasiliae. — Exterius H. Rickii simillina; differt subiculo plano stromatibus minoribus, peritheciis immersis, ostiolis vere prominulis, praecipue sporis.

10. Hypocrea Rickii Theissen, Ann. Mycol. IX, 1911, p. 58, tab. VII 5519 fig. 72. — Stromatibus pulvinatis, applanatis hemisphaericis, 0,5-1 mm. diam. e bysso albo-pulvinato oriundis, ex albo floccosis ochroleucis, dein fuscescentibus, superficie ob perithecia sublibera mammilloso-asperis, ostiolis non prominulis fusco-brunneo-punctatis; peritheciis ovoideis, 190-250 × 135-215, parietibus sat crassis (14-20) v. etiam piriformibus v. pressione mutua irregularibus; ascis elongatis cylindraceis, supra rotundatis, pedicello perbrevi, p. sp. 75-80 × 5,5; sporis hyalinis 9-10 × 4-5, cellula superiore rotundata, inferiori subrectangulari.

Hab. in ligno corticato, Rio Grande do Sul, Brasiliae.

11. Hypecrea degenerans Syd., Enum. Philipp. Fungi I, in Philipp. 5520 Journ. of Sci. VIII (1913) p. 274.— Stromatibus sparsis vel aggregatis primitus immersis dein erumpenti-superficialibus, discoideopulvinatis, rotundatis, semper convexis, matrici omnino lateque adnatis, 1-2 mm. diam., extus atro-brunneis vel atris, intus vivide flavo-virentibus, ostiolis peritheciorum non vel vix punctatis; peritheciis distichis, usque tristichis, globoso-conicis; ascis linearieylindraceis, p. sp. 60-85 × 4,5-6, octosporis; sporidiis biglobosis, hyalinis, levibus, intra ascos jam secedentibus, articulis 4-4,5 μ diam.

Hab. in cortice emortuo, Indochina, Annam, Nha-trang (C. B.

ROBINSON). - A caeteris speciebus differt stromate initio immerso et tunc habitu fere Diatrypes.

12. Hypocrea gyrosa Theissen, Ann. Mycol. IX, 1911, p. 59, tab. VI, 5521 fig. 53. - Stromatibus sessilibus, lata basi insidentibus v. infra coarctatis centraliterque affixis, 1-4 mm, diam. 0,8-1,3 mm. altis, margine rotundato-recurvatis, flavidulis, superficie giroso-plicata et mammilloso undulata, ostiolis nigris punctiformibus, dense stipatis pictis, disco convexo, medio umbilicato: peritheciis stipatis, applanato-globosis, 155 × 190 v. ellipsoideis, 170-240 × 160-185, abrupte in collum longiusculum 85-100 u longum coarctatis: ascis 125-155 \* 5-5.5, cylindraceis; sporis 10.5 \* 3-3.3, cellulis subaequalibus.

Hab. in ligno decorticato, Rio Grande do Sul, Brasiliae. - H. intermediae affinis, differt tamen ostiolis distinctissimis nigris, disco plicato convexo, stromate sessili non turbinatim stipatis praecipue sporis.

13. Hypocrea intermedia Theissen, Ann. Mycol. IX, 1911, p. 61, tab. 5522 V fig. 27. VI fig. 51. VII fig. 67. - Stromatibus turbinatis, hypothallo tenuissimo, determinato, 2 mm. lato insidentibus, applanatis, <sup>3</sup>/<sub>4</sub>-1, <sup>1</sup>/<sub>4</sub> mm. altis, 2-4 mm. latis, primitus flavis, dein ferrugineis, brunnescentibus; discus concavus, medio umbilicatus, leniter mammillosus, in sicco rugosus, luteo-stramineus, ostiolis luteo-brunneolis, delicatissimis, vix sub lente visibilibus punctatus, subtus angustatus in basin sterilem stipitiformem cylindricam v. potius doliifor mem; contextus albidus, e cellulis polygonalibus, majusculis, circ. 16 μ diam. compositus; stratum pseudo-epidermale circ. 30 μ cr., e cellulis angustioribus (hyphis densus intricatis et brevius articulatis) formatum, rubescens; peritheciis immersis, botuliformibus (collo circ. 65 µ longo, ipsa perithecii cavitas elliptica, 150-190 × 110-140) haud stipatis; ascis breviter pedicellatis, anguste cylindraceis, p. sp. 59-64 × 3,5-4, pedicello fere filiformi, 10-16 µ longo; sporis viridulis, minutissime asperulis, 8 × 2,7-3,3, cellula superiori rotundata, inferiori paullo elongata.

Hab. in ligno decorticato, Sao Leopoldo, Rio Grande do Sul, Brasiliae (RICK). - Differt ab H. umbilicata P. Henn. stromatibus multo minoribus sporisque verrucosis. H. turbinata Starb. simillina est, differt tamen fabrica disci sporisque obscure olivaceis et glabris.

14. Hypocrea borneensis H. S. Yates, F. from Brit. N. Borneo, in Phi- 5523 lipp. Journ. of Sc. Bot. v. 13., 1918, p. 237. - Stromatibus gregariis, sessilibus, convexo pulvinatis, 3-6 mm. diam., extus brunneis, intus pallide brunneis; peritheciis globosis, immersis, ostiolis

punctiformibus, brevibus; ascis cylindraceis, aparaphysatis. 70-80 ≈ 5-6, 8-sporis (simulate 16-sporis); sporidiis monostichis e cellulis 2 aequalibus compositis mox secedentibus, cellulis singulis globosis. hvalinis, 4-5 µ diametro.

Hab. ad truncum emortuum Heveae brasiliensis (Euphorbiaceae), Membakut in ins. Borneo bor.

15. Hypocrea subiculata Theissen, Ann. Mycol. IX, 1911, p. 56, tab. 5524 V fig. 22-23, VII fig. 68. - Subjection albido-flavidum, late effusum, tenuissimum, ex hyphis hyalinis 6-8 µ cr. unilateraliter nodulosis, densiuscule intricatis compositum, in quo niculant placentae stromaticae, pulvinato-applanatae, ambitu irregulari plus minusve orbiculari, c. 350-500 µ diam., tenues, peritheciis immersis vix vertice subemergentibus leniter mamillosae, primitus flavidulae, ostiolis peritheciorum cinnamomeis pictae, dein magis magisque totâ superficie cinnamomeae; perithecia singula 150-170 µ diam. pauca in quoque stromate (9-20), sphaeroidea; asci cylindracei breviter pedicellati, p. sp. 80-92 × 4.5-5; sporae hyalinae medio vix constrictae. 10 > 4, in articulos fere aequales secedentes.

Hab. in Poria sp. (Fungi), Sao Leopoldo, Rio Grande do Sul. Brasiliae (RICK).

16. Hypocrea ibicuyensis Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5525 Buenos Aires XXIII (1912) p. 75. — Stromatibus sparsis vel hinc inde 2-3 gregariis, discoideis vel discoideo-repandulis, 2-10 mm. diam., inferne matrici latiuscule adfixis, planis, superne convexulis, atroolivaceis, ostiolia papilliformibus vix obscurioribus laxe exasperatis, intus carnoso-ceraceis albis; loculis globosis 100 µ diam., omnino infossis; ascis cylindraceis, constipatis, 90 \* 5, aparaphysatis: sporidiis recte monostichis, bicellularibus, levibus, articulis globosis, 4 μ diam. mox secedentibus.

Hab. ad truncos excaesos decorticatos Erythrinae cristag alli (Leguminosae), in silvulis uliginosis prope Ibicuy, Entre Rios. Argentina.

17. Hypocrea corticioides Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5526 Buenos Aires XXIII (1912) p. 75. — Stromatibus latissime effusis. 1-10 cm. diam., tenuibus, 0,5 cr., ligno denudato vel cortice relaxato tecto insidentibus, laxissime adnatis et facillime secedentibus, repando-difformibus, extus ochroleucis vel pallide fulvis, intus compactiusculis, carnoso-ceraceis, albis; peritheciis copiosis, omnino immersis, globulosis, 130-140 µ diam., ostiolo vix papillato, leviter infuscato, minutissime tantum manifestis, membranaceis, fulvellis.

udis cupulato-collapsis; ascis cylindraceis, breviter pedicellatis,  $55.60 \times 4$ , aparaphysatis; sporidiis recte monostichis, hyalinis, bicellularibus, articulis globosis,  $3.3.25 \mu$  diam., mox secedentibus.

Hab. ad truncos excaesos emortuos Erythrinae cristagalli (Leguminosae), in silvulis uliginosis prope Ibicuy. Entre Rios, Argentina.

- DIALHYPOCREA Spegaz., Rel. mycol. trop. etc., in Bol. Ac. Nac. Cienc-Cordoba, t. 23., 1919, Extr. p. 113. Perithecia superficialia caespitosa, stromate parcissimo basi juncta ut in Eunectriis plurimis; asci lineares aparaphysati octospori; sporae hyalinae didymae, articulis subglobosis mox secedentibus.— Stroma et perithecia Eunectriae sporidia vero Hypocreae.
- 1. Dialhypocrea puiggariana Spegaz., l. c. cum icon. Stromatibus numerosis discretis pusillis (250-500  $\mu$ ) sessilibus glaberrimis flavidulomelleis, 1-6-perithecigeris; peritheciis globosis fere liberis vix basi stromati insititiis et inter se breviter confluentibus, non v. vix papillulato ostiolatis, carnosulis, levibus opacis, 120-150  $\mu$  cr.; ascis angustis apice rotundatis, basi breviter attenuato-pedicellatis, octosporis, 80  $\times$  5-6; sporidiis rectis monostichis parvis 7-8  $\mu$  long., levibus, loculis aequaliter cuboideo-subglobosis, 4-5  $\times$  3-4 crassis.

Hab. ad ramos denudatos putres, in silvis Apiahy, Brasilia (J. Puiggari).

CLINTONIELLA Sacc. — Syll. II p. 532, XIV p. 645, XVI p. 588, XXII p. 480.

Clintoniella incarnata (Pat. et Har.) Sacc. et Trott. — Syll. XXII p. 5528
 480 — Notae Mycol. XXII p. 190 (R. Acc. Pad. 1917).

Hab. (adde) in fragmentis corticalibus dejectis indet. Filfil, Erythraea, Africa trop. — Pulchellå, exigua species. Asci cylindracei,  $60.65 \times 5,5.6$ , octospori; sporidia oblique monosticha,  $8 \times 4,7$ , hyalina, immatura diblasta, probabiliter matura 1-septata; ostiola punctiformia, videntur atro-sanguinea.

PODOCREA Sacc. — Syll. II p. 530, XIV p. 645, XVI p. 587, XVII p. 799, XXII p. 480.

Podocrea zeylanica Petch, Ann. R. Bot. Gard. Peradeniya v. VI, 552
 P. III, 1917, p. 230. — Stromatibus fasciculatis, simplicibus, clavatis vel cylindraceis, interdum compressis, supra saepe lobatis, ad 3 cm. alt., 4 mm. diam., rufis vel pallide brunneis, ostiolis sa-

turatioribus, bası pallescentibus, glabris; peritheciis confertis, ad 0,25 mm. diam.; ascis 60.80 × 3.4, cylindraceis, octo-dein sexdecim-sporis; sporis viridi-hyalinis, globosis, 3.4 diam., vel ovoideis, 3.5 × 2.5, leniter verrucosis.

Hab. ad ramos dejectos, Peradeniya, Ceylon, Asia.

### HYPOCREOPSIS Karst. - Syll. IX p. 980, XVI p. 590.

Hypocreopsis Phyllostachydis (Syd.) Miyake et Hara, Stud. ub. Pilze 5530 d. Bamb. in Jap., in litt. VI, 1912.— Ustilaginoidea Phyllostachydis Syd. — Syll. XVI p. 382. — Peritheciis stromate immersis, subglobosis, 170-200 \* 150 170. subhyalinis; ostiolis papillatis emergentibus; ascis 8-sporis cylindraceis v. clavatis, 60-80 \* 4-5; sporidiis ellipsoideis v fusoideis, 1-septatis, non v. vix constrictis, 6-9 \* 3-4, hyalinis, loculis non v. 1 guttulatis

Hab. in culmis Phyllostachydis (Graminaceae), Komba Tohyo (SHIRAI, MIYAKE). — Specimina a cl. Sydow observata vetusta, obsoleta, hinc error de genere. Stroma verruciforme 5-9 mm long., 4-5 mm. diam., subroseum ostiolis punctatum.

HYPOMYCES Fr. — Syll. II p. 466, IX p. 954, XI p. 356, XIV p. 641, XVI p. 582, XVII p. 803, XXII p. 480.

1. Hypomyces pallidus T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. 5531 Peradeniya v. VII, P. II, 1920, p. 134. — Mycelio albo compacto effuso; conidiophoris verticillatis usque 150 μ long. infra 4 μ cr., septatis; conidiis non visis; peritheciis immersis ostiolis prominen tibus praeditis, quandoque superficialibus, hyalinis globosis v. ovoi deis, usque 0,4 mm. altis, 0,2 mm. diam., ostiolo papilliformi praeditis; ascis cylindraceis octosporis, 100-110 × 6; sporidiis plus minus oblique monostichis, anguste ovoideis, inaequilateris. v. fusoideis, hyalinis, cohacervatis albis, uniseptatis, non v. leniter constrictis, minute spinulosis, utrinque obtusis, 9-13 × 3-4.

Hab. in pileo Agaricacearum (Fungi), Deviturai, Ceylon, Asia.

2. Hypomyces sulphureus H. et P. Sydow, Ann. Mycol. XII, 1914, 5532 p. 564. — Stromate tenui membranaceo, continuo, intense sulphureo, effuso, ex hyphis laxis byalinis 3-4 μ crassis formato; peritheciis immersis, dense sparsis, ovato-globulosis, vel succineo-flavis vel succineis, 250-300 μ diam., ostiolo obtuse conico; ascis cylindraceis, 75-95 ≈ 6, octosporis, aparaphysatis; sporidiis monostichis vel oblique monostichis, fusoideis, utrinque leniter atte-

nuatis et apiculo minutissimo saepe vix visibili auctis, medio constrictis, primitus non dein modice septatis, hyalinis, distincte verrucosis, 15.70 \* 4.5.

Hab. parasiticus ad Hirneolam affinem (Fungi), Mt. Maquiling prov. Laguna, Luzon, Ins. Philippin. (P. W. GRAFF).

3. Hypomyces flavo-lanatus Petch, Ann. R. Bot. Gard. Peradeniya v. 5533 VI P. III, 1917, p. 229.— Subiculo albo, tenui; peritheciis confertis, aurantiacis, globosis, 150-200 μ diam., hyphis flavis radiantibus vestitis, ostiolo papillato fusco-rubro; ascis octosporis, ad 70 × 4; sporis monostichis viridi-hyalinis, ovoideis, interdum attenuatis, uniseptatis, leniter constrictis, obtusis, minutissime verrucosis, 6-8 × 2,5-3; statu conidiophoro stilboideo, ad 1,2 mm. alt.; stipite aurantiaco, basi 40 μ diam., sursum attenuato, laxo; capitulo globoso, ad 100 μ diam.; conidiophoris penicillicideis; conidiis subglobosis hyalinis, 2,5 μ diam.

Hab in Poria sp. (Fungi), Peradeniya, Ceylon, Asia.

4. Hypomyoes Rubi (Osterw.) Wollenw. in Phytopathology III p. 211 5534 et. 224 (1913), tab. XXII fig. 14-16, Nectria Rubi Osterwalder, Ber. deutsch. bot. Ges. XXIX Bd., 1911, p. 620, tab. XXII. — Peritheciis primum flavo-virentibus, dein rubris, limoniformibus ostiolo papillato praeditis, 500 μ alt., 430-460 μ er.; ascis cylindraceo-clavatis 106-119 μ long., aparaphysatis v. vix paraphysatis; sporis bilocularibus, utrinque rotundatis in quoque loculo 2-3-guttulatis, monosticis v. supra disticis, 15,9-18,6 × 4,6-5,2. Statu conidico (Fusarium, an potius Ramularia?): conidiis cylindraceo curvulis utrinque ellipsoideo rotundatis, continuis v. 3-5 septatis et tunc 53,2-61,2 × 6,6-7-9; conidiophoris dichotome v. trichotome ramosis; sporodochiis violaceis.

Hab. in radicibus languentibus R u b i i d a e i « Baumforths Sämling » culti. Wädenswil, Helvetia.

5. Hypermyces ipomeeae (Halst.) Wollenw. in Phytopathology III p. 5535 34 (1913) Fig. D. — Ita vocanda est Nectria Ipomeeae Halsted, Syll. XI p. 357. — Peritheciis ovoideis rugosis rubris 225-375 × 175-300; sporidiis uniseptatis 10-13 × 4,5-6. Status conidicus fusarioideus (sect. Martiellae), conidiis apice magis acutatis basi magis pedicellatis, tunc 5-septatis, 45-70 × 4,25-5,5, tunc 3-5 septatis, 30-70 × 3,75-5,5; hyphis unicellularibus 6-12 × 3-4,75. Chlamydosporis 7-10 μ (ex Wollenweber).

mycetis, sed sporae valde inaequaliter septatae. — Typus generis Apiocrea chrysosperma (Tul.) Syd. — Hypomyces.

nectria p. 662.— Perithecia in subiculo byssino insidentia; asci aparaphysati, ascosporae utrinque rotundatae v subacutatae nec apiculatae, uniseptatae, monostichae.— Est Byssonectria Karst. sporis bilocularibus; inter Hypomyces et Nectria medium, a primo differt sporis rotundatis v. subacutis nec apiculatis, ab altero stromate bys soideo et habitat.

Hue spectant Byssonectria violacea (Fr.) Seav., Hypomyces aureonitens Tul., Hyp. candicans Plowr., Hyp. berkeleyanus Plowr.

- LISEA Sacc. Syll. II p. 517, XI p. 360, XIV p. 640, XVI p. 581, XVII p. 806.
- 1. Lisea revocans Sacc., Notae Mycol. XX, Nuovo Giorn. bot. it. N. 5538 S, 23., 1916. p. 205. Peritheciis hinc inde dense et saepius longitudinaliter congregatis, globoso-conoideis, rugulosis, 200 μ alt., 170 μ cr., contextu dense et minute celluloso atro-olivaceo v. atrorufescente, cellulis 10-12 μ diam., ostiolo rotundo 20 μ diam., periphysibus angustissimis subhyalinis praedito; ascis octosporis fusiformibus, utrinque acutulis, 55-60 × 11-12; paraphysibus deliquescentibus; sporidiis distichis fusoideis, interdum curvulis, 18-23 × 4,5-5, e hyalino dilutissime olivaceis.

Hab. in foliis emortuis Imperatae cylindricae (Graminaceae), Los Baños, Ins. Philipp.— Est e typico grege Gibberellae, sed didymospora.

2. Lisea? pulicaris Speg., Anal. Mus. Nac. Buenos Aires XXVI p. 127 5539 (1914). — Peritheciis superficialibus, sparsis vel gregariis, subseriatis, minutis, globosis, 150·180 μ diam., glabris, non collabescentibus, ostiolo minuto impresso pertusis, contextu grosse parenchymatico-celluloso, amoene caeruleo; ascis subclavulatis, basi modice attenuato pedicellatis, 80·100 \* 12·14, aparaphysatis sed muco subfilamentoso obvallatis; sporidiis oblique distichis, ellipsoideis, utrinque acutiuscule rotundatis, medio septato-constrictis, 15·20 \* 7·9, loculis acqualibus saepius grosse 1-guttulatis.

Hab. in culmis dejectis putrescentibus Penicillariae typhoidis (Graminaceae), in sepibus prope Daccar, Senegal— An Gibberellae pulicaris (Fr.) Sacc. forma didymospora?

3. Lisea Spatholobi Rehm, Ascomyc. Philipp. III, in Philipp. Journ. of 5540

Sci. VIII (1913) p. 395. — Peritheciis in maculis hypophyllis plus minusve circularibus, 1-2,5 cm. latis, dilute flavescentibus gregarie sessilibus, globoso-conoideis, haud papillulatis, poro pertusis, fuscis, 150 µ diam., excipulo crasso, parenchymatice contexto, cellulis faciliter dissolutis, extus obscure fusco, interius coerulescente, versus basim verrucoso cellulis conoideo-prominentibus; ascis fusiformibus, octosporis, aparaphysatis, 30 × 8-10; sporidiis distichis, oblongis, utrinque obtusis, rectis vel subcurvatis, continuis, biguttatis, dein medio septatis, non constrictis, utrinque biguttatis, hyalinis, 10-12 × 3-4.

Hab. in foliis Spatholobi gyrocarpi (Leguminosae), Luzon, Prov. Laguna, Mt. Maquiling, Ins. Philipp. (E. B. COPELAND).—Subiculum nullum praesens.

4. Lisea Tonduzi Spegaz., Fungi Costaric. nonn. in Bol. Ac. Nac. Cienc. 5541 Cordoba, t. 23., 1919, Extr. p. 202, cum icon.— Perithecia superficialia, solitaria v. paucigregaria (2-3), 150-180 μ diam., uda globulosa, sicca corrugato-collabescentia, atro-coerula, glaberrima, contextu grosse parenchymatico amoene intenseque caeruleo; asci subcylindracei, mox diffluentes, 8 spori, aparaphysati 1, 75-80 × 15-16; sporae distichae elliptico-subobovatae, medio 1-septatae non constrictae, laeves hyalinae, 18-20 × 8.

Hab. communis in fructibus immaturis dejectis C o f f e a e sp. (Rubiaceae), in agris prope Tuis, Costarica, America trop.

## Sect. 5. Phaeodidymae

LETENDRAEA Sacc. - Syll. II p. 538, XIV p. 646, XXII p. 484.

1. Letendraea rickiana Rehm, Ascom. Exsicc, fasc. 55 n. 2114, Ann. 5542 Mycol. XII, 1914, p. 173. — Peritheciis dispersis, sessilibus conoileis, minutissime papillatis. glabris, fusco-luteis, parenchymatice ex cellulis perparvulis contextis, 150 μ latis; ascis cylindraceociavatis, apice rotundatis, stipitatis, 70-75 × 8-10, octosporis; sporis oblongo-ellipsoideis, medio, rarissime, infra medium septatis ibique paullulum constrictis, utraque cellula primitus 1-guttata, hyalinis, dein fuscis, 8-0 × 4-5, monostichis, paraphysibus filiformibus tenerrimis.

Hab. truncos putridos F a g i (Fagaceae), Sountagberg, Austria inf. (STRASSER).— L. eurotioidés Sacc. et L. luteolae E. et Ev. proxima sed fabbrica peritheciorum distincta.

# Sect. 6. Hyalophragmiae

- ORCADIA Sutherland, Trans. Brit. Myc. Soc. V, pt. I, 1914, p. 151 (1915). Stroma nullum. Perithecia simplicia, immersa, contextu distincte molli pallidoque, numquam carbonaceo, ostiolo elongato fastigato praedita. Asci cylindracei vel clavati, octospori, paraphysati. Sporidia hyalina, transverse 2 pluri-septata. Genus Cesatiellae forte affine, sed ostiolo elongato recedit.
- Orcadia Ascophylli Sutherl., loc. cit., tab. 3 fig. III. Mycelio hya- 5543 lino; peritheciis thallo omnino immersis, globosis vel arcuatis, mollibus, pallidis, 160-200 μ diam., ostiolo elongato, lato, cylindraceo, 80-125 \* 35 superficiem attingente sed non protrudente; ascis clavatis, octosporis, 65-75 \* 17,5-18; periphysibus numerosis; paraphysibus paucis, filiformibus, simplicibus, sporidiis cylindraceis, parum curvatis, 3-septatis, flavescentibus.

Hab. in thallo vivo Ascophylli nodosi (Algae), Orkney, Scotia.

2. Orcadia pelvetiana Sutherl., New Phytologist, v. XIV, 1915, p. 183, 5544 fig. 1.— Mycelium in quibusdam locis, hyalinum; stroma nullum; perithecia simplicia, 110-140 μ diam., globosa, mollia, pallida, thallo omnino immersa, ostiolo longissimo, 160-180 μ longo, 20-30 μ lato, cylindraceo vel fastigato, ad superficiem pertinente; ascis clavatis vel fusiformibus curvatisve, 50-65 × 11-13, octosporis; paraphyses deliquescentes; sporidia fusiformia, curvata, circa 40 × 4-5,3 septata, primo hyalina demum flavescentia.

Hab. in thallo vivo Pelvetiae canaliculatae (Algae), Orkney and Clare Island, Britannia.

- BIONECTRIA Spegaz., Fungi Costaric. nonn., in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 201. Biophila; stromata subcarnosula pallidula matrici innata parum manifesta; perithecia carnosula laeticoloria, plus minusve superficialia, constipata sed discreta basi stromate communi confluentia; asci octospori; sporae hyalodidymae. Est Nectria in partibus viventibus plantarum vigens.
- 1. Bionectria Tonduzi Spegaz., l. c. cum icon. Perithecia dense gre- 5545 garia, stromate parcò matrici innato-insidentia, primo suberumpentia, serius omnino superficialia 100-150 µ diam. carnoso-ceracea glabra sed squarroso-rimulosa, carneo-ochroleuca, ostiolo umbona-

tulo fuscescente coronata, in sicco corrugata v. subcupulato-collabescentia, contextu indistincto; asci fusoidei utrinque sensim attenuati apice rotundati, postice caneati ac pedicello brevi crassoque suffulti, aparaphysati y, parcissime mucose pseudoparaphysati 70-80 × 15; sporae distichae ellipticae non v. lenissime subclavulatae. medio 1 septatae non constrictae, rectae, laeves, hyalinae, 25 = 10

Hab. in ramis et foliis vivis Buetneriae carthagen ens i s (Sterculiaceae), prope S. Josè, Costarica, America trop.

CALONECTRIA De Not. - Syll, II p. 540, IX p. 982, XI p. 363, XIV p. 647, XVI p. 593 et 1141, XVII p. 809, XXII p. 487.

1. Calonectria Gymnosporangii Jaap, Ann. Mycol, 15., 1917, p. 10. - Peri- 5546 theciis in Gymnosporangio parasiticis, in acervulos verruciformes 1,5-3 mm. latos collectis, atro-rubris, glabris, globosis, 250-350 µ lat. ostiolo papilliformi, aetate collabescentibus; ascis tereti-clavatis, apice rotundatis, 150 × 8-10, octosporis; sporidiis oblongofusoideis, rotundatis, 4-cellularibus; rarius 2-cellularibus, 15-30 \* 7-10, saepe guttulatis, hvalinis; paraphysibus non visis.

Hab supra Gymnosporangium confusum (Fungi) ad ramos Juniperi phoeniceae et J Oxycedri (Coniferae) in consortio Fusarii Gimnosporangii quod est verisimiliter status conidiophorus, in peninsula Lapad pr. Ragusam, Dalmatia.

2. Calonectria limpida Syd., Leaflets of Philipp. Bot. V (1912) p. 1545. - 5547 Peritheciis dense gregariis, in mycelio Meliolae parasitantibus, conicis, 70-110 µ altis, 50-80 µ latis, flavo-melleis, vel virescenti-flavis, in mycelio tennissimo albido ex hyphis dense intertextis, hyalinis, ramosis, remote septatis, 2-3 µ cr. composito, superficialibus, circa apicem pilis brevissimis hyalinis vel subhyalinis, obtusis, 3,5-5 µ crassis obtectis, ostiolo prominulo, contextu e cellulis minutis imbricatim superpositis composito, hinc inde superficie lenissime asperulis; ascis fasciculatis, fusoideo clavatis vel clavatis, apice saepe attenuatis, sessilibus vel brevissime stipitatis, 32-42 \* 6-10, octosporis; sporidiis fusoideis, utrinque obtusis, primo medio 1 septatis, dein 3-septatis, haud constrictis, hyalinis, 14-17 \* 2-3.

Hab. parasitica in mycelio vetusto Meliolae (Fungi) ad folia Acalyphae stipulaceae (Euphorbiaceae), Brooks Point, Palawan, ins. Philipp. - Habitus Ophionectriae sed sporidiis Calonectriae.

3. Calonectria coralloides A. Maublanc, Bol. Agric. Sao Paulo 1915, p. 5548 315-316 et tab. VI fig. 5-8; Bull. Soc. Mycol. de Fr., XXXVI, 1920,

p. 37, tab. III fig. 5-8. - Peritheciis minutis (100-150 µ diam.), sparsis, globosis, poro apicale vix conspicuo, albidis, in mycelio tenue, arachnoideo, ramoso, hyalino sessilibus, pilis numerosis praecipue ad apicem ornatis; pilis hyalinis, rigidis, brevibus, 20-30 µ altis, 5-8 crassis, apice irregulariter dichotome ramosis, crasse tunicatis; ascis cylindricis v. fusoideis, brevissime pedicellatis, tunica crassa praeditis, apice rotundatis, 50-75 \* 14-16, 8-sporis, paraphysibus filiformibus; sporidiis distichis, clavatis, demum tenuiter 3-septatis, guttulatis granulosisve, non vel vix medio constrictulis, hyalinis, 15-20 × 5-8, apice primum rotundatis, demum (an germinantibus?) attenuatis et fere appendiculatis, ad basim attenuatis, demum appendiculo obtuso recurvoque ornatis.

Hab. in foliis Clidemiae hirtae G. Don (Melastomataceae), supra mycelium Meliolae Melastomacearum Speg. (Fungi), socio Trichothyrio fimbriato, Rio de Janeiro, Brasiliae.

4. Calonectria graminicola F. L. Stevens, Bot. Gazette, 65., 1918, p. 5549 232. — Mycelium congregatum submembranaceum. Peritheciis e parcis numerosis, rubridis arescendo pallidis, globosis, 200.225 µ diam., cellulis irregularibus 10-18 µ diam.; setulis perithecialibus subco piosis non septatis e apice obtuse regulariter subconoideis, basi non bulbosis, 75 µ long. basi 15 µ cr.; ascis numerosis 8-sporis cylindraceis 75 × 7-8; paraphysibus copiosis filiformibus; sporidiis maturis 3-septatis, e hyalinis pallide stramineis, rectis, curvis v. sigmoideis, utrinque acutis, 30-36 » 5.

Hab. parasitica in Meliola Panici (Fungi), in Lasiacis compacta et L. divaricata (Graminaceae) et Mel. Andirae in Andira jamaicensis (Leguminosae), in Porto Rico.

5. Calonectria epimyces (Syd.) P. A. Sacc. - Hyalocrea (n. gen.) epimyces 5550 Syd., Ann. Myc. 15., 1917, p. 214. - Perithecia pluria aggregata, mycelio mucedineo byssino hyalino ex hyphis repentibus tenuibus 2-2,5 µ crassis vix vel remote septatis ramulosis superficialiter insidentia, globulosa, 150 185 µ diam., albido carnea, poro minutissimo vix perspicuo, pariete ca. 10 µ crasso minute parenchymatice e cellulis 4-6 μ diam. contextu pilis longiusculis (usque 180 μ) hyalinis continuis obtusis 2,5-3 µ crassis flexuosis saepe coalitis obsessa; asci ovato oblongi vel oblongi, octospori, sessiles, 90-120 v 40-52, ad apicem incrassati; sporae conglobatae, oblongo-clavulatae, utrinque rotundatae, 3-septatae, non constrictae, cellulis duabus extimis semper multo minoribus, hyalinae, 33-40 \* 12-13.

Hab. in superficie stromatis Phyllachorae (Catacaumatis),

Elmeri (Fungi) ad folia Fici Minahassae (Moraceae), Mt. Maquiling, Ins. Philipp. (C. F. BAKER).

Calonectria Bambusae (Hara) v. Höhn., Ann. Mycol. 17., 1919, p. 5551
 119. — Miyakeamyces (n. gen.) Bambusae Hara, Sydow, Fungi exot. exsice, n. 385.

Hab. parasitica in Phyllachora Phyllostachydis Hara (Fungi), in foliis Phyllostachydis bambusoidis (Graminaceae), Japonia.

7. Calonectria pellucida O. Rostrup, Dansk Botan. Arkiv. 2., 1916, 5552 n. 5, p. 8, fig. 7. — Peritheciis superficialibus, perfecte sphaericis, pellucido-albis v. hyalinis, 140-150 μ diam., pariete 15 μ crasso; ascis cylindraceis, breviter pedicellatis, saepe curvatis, 160-165 × 5; sporis monostichis, fusoideis, utrinque acutissimis, 3-5 septatis, qua vix in conspectum cadunt, instructis, guttulatis, 18-21 × 3,7-4,3.

Hab. ad paleas Dactylidis glomeratae (Graminaceae), S. Gelsskov, Dania.

8. Calonectria perpusilla Sacc., Notae Mycol. XXIII p. 69 (Accad. Veneto-trent. 1917). — Peritheciis glumicolis, sparsis, perexiguis, superficialibus, subglobosis, dilute aurantiacis, 80-85 μ diam., udis
90-100 μ diam., vertice obtusis, senio saepe collabentibus; contextu
celluloso tenui, dilute roseolo; ascis teretiusculis, brevissime stipitatis, primitus apice abrupte-tenuatis, 8-sporis, minutissime 2-foveolatis, 35-40 × 7; paraphysibus bacillaribus spuriis: sporidiis
oblique monostichis fusoideis, diu continuis, demum 3-septatis, non
constrictis, minute 2-4-guttulatis, rectis, hyalinis, 10-12 × 2,4.

Hab. in glumis emortuis Oryzae sativae (Graminaceae), Los Baños, Ins. Philipp. — Socium adest Myrothecium Oryzae, quod cfr. suo loco.

9. Calonectria nivalis Schaffnit, Mycol. Centrlbl. II (1913) p. 246, fig. 5554 1-2. — Nectria graminicola Bk. et Br., saltem p. p. — Peritheciis gregariis, subsuperficialibus, saepe caespitosis, globoso-conoideis, 100-300 × 150-200, rubro-lateritiis vel rubro-salmoneis, excipulo tenui, subhyalino; ascis copiosis, oblongis vel clavulatis, 50-60 × 8-10, paraphysibus paucis aequilongis intermixtis; sporidiis irregulariter distichis, fusoideis, saepe inaequilateris vel curvulis, utrinque rotundatis, dilute roseis, medio septatis (raro 2-septatis), 12,5-16 × 2,5-3,5. — Status conidicus Fusarium nivale (Fr. p. p.) Ces. conidiis 14,5-2,5 × 3-4, 1-6 (typice 3-) septatis. — Sclerotia brunneoatra, globosa, 150-300 μ diam. — Chlamydosporae ovoideae, 11,5 × 7,5, vel globosae, 6,5 μ diam., uni-raro bi-cellulares.

Hab. ad basim culmorum Secales aliorumque graminum (Graminaceae), nec non in Trifolio (Leguminosae). ex hérbario Musaei berolinensi.

10. Calonectria höhneliana Jaap, Ann. Mycol. 14., 1916, p. 10. — Pe-5555 ritheciis sparsis, sessilibus, plus v. minus globulosis, 150-300 μ diam., contextu flavo-rubello, serius brunneolo; ascis anguste clavatis, plerumque medio crassioribus, apice obtuse tenuatis, stipitatis, 60-85 × 6-8, octosporis; sporidiis anguste tereti-fusoidcis, 17-24 × 2-2,5, rectis, rarissime leviter curvis, 4-cellularibus, hyalinis, distichis; paraphysibus copiosis, filiformibus, 1 μ cr.

Hab. in cladodiis adhue vivis Rusci acule ati (Liliaceae), pr. Castelnuovo, Dalmatiae.— Perithecia senio cyanescentia ad Gibberellam nutant: ex subiculo flavo-griseolo matricem obducente videntur orivi

11. Calonectria hibiscicola P. Henn., Hedw. vol. 48. (1908) p. 105. — 5556 Peritheciis in caespitulis pulvinatis, rotundatis, isabellinis, 1-2 mm. diam., erumpentibus, subglobosis, verruculosis, papillatis, hyalinofiavidulis, 180-200 μ diam; ascis clavatis, obtusis, paraphysatis, 4-sporis, 60-70 × 9 11; sporidiis oblique monostichis, ellipsoideis, saepe curvulis, obtusis, 3-septatis, hyalinis, 18-24 × 5-7.

Hab. in cortice Hibisci schizopetali (Malvaceae); hort. botan. Goeldi, Parà, Brasilia (BAKER).

12. Calonectria ambigua Spegaz. — Syll. II p. 544 — var. exappendissor culata Spegaz., Rel. mycol. trop. etc., in l. c. Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 113. — Peritheciis subglobosis 250 μ diam. puberulis ostiolo umbilicato praeditis; ascis cylindraceis subclavatis, crasse tunicatis, 120 140 ≈ 12-16, paraphysatis, octosporis; sporis oblique distichis subfusoideis utrinque acutatis, triseptatis, non constrictis, 36-40 ≈ 6-7, levibus hyalinis.

Hab. in folis coriaceis vivis Sapindaceaef, prope Apiahy, Brasilia (J. Puiggari).

13. Calonectria erythrina P. et H. Syd, Ann. Mycol. X, 1912, p. 81.— 5558 Peritheciis superficialibus, solitariis v. in greges minutos caespitosis, subiculo nullo, globosis v. ovoideo globosis, 200-300 μ diam., usque 350 μ alt., aurantio-coccineis, in senectute ad fuscum vergentibus, levibus v. minutissime tantum granulosis, ostiolo minuto pertusis, in sicco profunde collabescentibus; ascis cylindraceis v. cylindraceo-fusiformibus 50-75 × 7-10, octosporis; sporidiis irregulariter distichis, oblongis v. subfusiformibus, rectis v. leniter inaequilateris, distincte 3-septatis, non constrictis, quaque cellula 1-gut-

tulata, apicibus obtusis, hyalinis, 14-18 × 3,5-4,5.

Hab. in corticibus et ad lignum putridum, Hayoep, Borneo sudor. (H. WINKLER).

14. Calonectria codes T. Pesch, Hypocr. zeyl. in Ann. R. Bot. Gard. 5559 Peradeniya v. VII, P. II, 1920, p. 135. — Peritheciis sparsis, superficialibus globosis, 0,25 mm. diam., arescendo collabescentibus, subtranslucidis e flavo-citrinis flavo-aurantiacis, quandoque globosis, plerumque pilis albis rigidis 20 50 × 5, acutatis incrustatis obsitis; ostiolo minuto parum conspicuo, poro 10 μ lato, periphysibus praedito; parietibus indistincte parenchymaticis, tritis guttulis oleosis ostendentibus; ascis clavatis apice subacutis, octosporis, 70 × 12; paraphysibus nullis; sporidiis oblique monostichis, hyalinis fusoideis v. anguste ovoideis, inaequilateris, 5-7 septatis, 18-29 × 5-6.

Hab. ad ramos dejectos, Peradeniya, Ceylon, Asia. — Peritheciis primum astomis et aggregatis ut ovos insectorum ludentibus.

#### BRESADOLELLA v. Höhn. — Syll. XVIII p. 797.

Bresadolella nigra T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. 5560 Peradeniya v. VII, P. II, 1920, p. 130. — Peritheciis nigris sparsis, in stromate compacto late effuso albo v. brunnescenti 0,15 mm. cr. insidentibus, globosis 66-100 μ diam. v. depresso globosis et 100 μ diam. 70 μ altis; parietibus parenchymaticis, fuscis, setis conicis 34 μ long, basi 7 μ cr. apice acutis, sparsis, nigro-brunneis gerentibus; ostiolo obtuso v. leniter papillato; ascis cylindraceis 30-34 × 3, dein clavatis et 6 μ latis, 8-16-sporis; sporidiis ovoideis 1-septatis septo constrictis, utrinque obtusis 5 × 2,5, articulis in asco separabilibus 2-3 μ diam., plerumque distichis.

Hab. verisimiliter parasitica ad perithecia H y p o c r e a e (Fungi) cujusdam, Hakgala Ceylon, Asia.

- BOYDIA A. Lorr. Smith, Trans. Brit. Mycol. Soc. t. VI, P. II, 1918, p. 151.— Perithecia nigro-brunnea, submersa, globoso-lenticularia, ostiolo breviter papillato pertusa. Asci elongato-clavati, octospori aparaphysati; sporidia elongata, curvula utrinque clavata, medio sensim attenuata, 1-septata, hyalina.
- Boydia.remuliformis A. Lorr. Smith, l.c., p. 151, fig. 1. Peritheciis 5561 solitariis, numerosis, cortice subvelatis, nigro-brunneis; contextu tenuiter membranaceo, ca. 400 μ diam.; ascis oblongis, ca. 155 μ long., 25 μ lat., apice rotundatis, basi leniter attenuatis, sporis elongatis ca. 100 μ long. in medio 3 4 μ, apicem versus 7-8 μ lat.

Hab. in caulibus emortuis Ilicis angustifoliae (Aquifoliaeae), West Kilbride, Ayrshire, Anglia (D. A. BOYD).

PARANECTRIA Sacc. — Syll. II p. 552, IX p. 987, XVII p. 812, XXII p. 491.

Paranectria luxurians Rehm, Ascom. Philippin. VII, in Leafit. of 5562
 Philippin. Bot. VIII, 1916, p. 2924. — Perithecia in mycelio Meliolae Macsae parasitica, dispersa, sessilia, ovata vel elongato-ovalia, dilute flavescentia, primitus glabra, postremo pilis dispersis, subcurvatis, obtusis, septatis, hyalinis, -50 \* 4 obsessa, 120-130 μ alta, 80-100 μ lata, poro minutissimo aperta, tenerrime pseudoparenchymatice contexta, ad basim hyphis hyalinis, 4 μ latis, Meliolae affixa eamque saepe plane obtegentia; ascis clavatis, -50 \* 10, 8-sporis, J — Sporis bacillaribus vel acicularibus, rectis, 5-7-septatis, hyalinis, 30-40 \* 2, parallelis. Paraphysibus nullis.

Hab. ad Meliolam Maesae (Fungi), Los Baños, Ins. Philipp. (C. F. BAKER, ELADIO SABLAN) ad Meliolam Panicum (C. F. BAKER).

2. Paranectria meliolicola F. L. Stevens, Botan. Gazette, 65., 1918, p. 5563 232, fig. 3. — Mycelium hyalinum ex hyphys 5  $\mu$  cr. efformatum, peritheciis copiosis, 75-120  $\mu$  diam. e rubris pallidis parce setulosis, 15-30-50  $\mu$  long.; ascis e clavatis ovatis, obtusis, 8-sporis tenuiter tunicatis, 45-55  $\star$  25-40; sporidiis hyalinis e oblongis oblongo-ellipsoideis, v. uno apice rectis altero curvatulis, 3-septatis, corpo 22, 30  $\star$  7-10, apicibus 8  $\star$  2.

Hab. parasitica in Meliola tortuosa (Fungi) in Pipere um bellato (Piperaceae), et in M. glabroide in P. adunco, Porto Rico.

3. Paranectria Miconiae. F. L. Stevens, Botan. Gazette 65., 1918, p. 5564 233, fig. 4.— Peritheciis globulosis, e griseis albis, 100-150 μ diam. basi pilosulis; pilis non septatis crasse tunicatis obtusis, longitudine dimidium perithecii aequantibus; ascis numerosis, e clavatis ovatis, obtusis tenuiter tunicatis, 60 × 12-15; sporidiis fusoideis medio fortiter inflatis apicem versus regulariter conoideis, 3-septatis, magnitudine, apicibus inclusis, 32 × 7-8, in massa v. in asco leniter griseis; paraphysibus filiformibus brevibus.

Hab. parasitica in fungo Microthyriaceo in foliis Miconiae (Melastomataceae), Yabucoa, Porto Rico.

STEREOCREA Syd., Ann. Mycol. 15., 1917, p. 216.— Stromata erum-

penti-superficialia, composita, singula globosa vel subglobosa, saepe stipitiformiter contracta, plurima in stromate communi botryose insidentia, in sicco perdura, tota superficie fertilia. Perithecia omnino immersa. Asci octospori, aparaphysati. Sporae elongato-clavatae, transverse multiseptatae, flavidae.

1. Stereocrea Schizostachyi Syd., l. c. — Stromata singula globosa vel 5565 applanato-globosa 1-3,5 mm., plerumque 2,5-3,5 mm. diam., saepe ad basim plus minus longe stipitiformiter contracta, in stromate communi irregulari erumpenti-superficiali dense botryoseque insidentia et tuberculos magnos 1,5-4 cm. diam. formantia, perdura, intus extusque atro-olivacea; perithecia per totam stromatis superficiem dense aequaliterque distributa, omnino immersa, 200-280 μ longa, 130-160 μ lata, pluristicha, pariete 23-35 μ crasso, ex hyphis tenuissimis dense parallele dispositis fibrosis contextu flavido vel flavo-brunneolo, ostiolo plano vix vel parum emergente; asci elongato-fusoidei, utrinque attenuati vel superne rotundati, 125-170 × 13-17, octospori, aparaphysati; sporae 2-3-stichae, elongato-clavatae, superne rotundatae, basim versus sensim attenuatae et saepe acutae, melius flagellatae, transverse 8-12-septatae non constrictae, flavidae, 48-70 × 7-8,5.

Hab. ad culmos Schizostach yi acutiflori (Graminaceae) et Schiz. sp., pr. Sorsogon (M. RAMOS), Bilivan (Mc Gregor), San Antonio (M. RAMOS), Alag River, Mindoro (E. D. MERBILL), in Ins. Philipp.

**BROOMELLA** Sacc. — Syll. II p. 557, IX p. 988, XI p. 364, XXII p. 492.

1. Broomella Zeae Rehm, Ascom. Philippin, VII in Leaflt. of Philip-5566 pin. Bot. VIII, 1916 p. 2923. — Perithecia in macula lata dilute rubidula, gregaria, innata, sparsa, mox lineariter, arcte congregata, globulosa, non papillulata, dilute roseola, 0,1 mm. lata, uda per rimas corticis emergentia, excipulo glabro parenchymatice tenuissime contexto, subhyalino; ascis fusiformibus, -50 × 8, 8-sporis. Sporidiis fusiformibus, 1-demum 3 septatis, hyalinis, 12-14 × 3-4, distichis. Paraphysibus mucosis.

Hab. ad emortuum calamum Zeae maydis (Graminaceae), Los Baños, Ins. Philipp. (M. B. RAIMUNDO).

GIBBERELLA Sacc. — Syll. 11 p. 552, IX p. 988, XI p. 363, XIV p. 649, XVI p. 599, XVII p. 813, XXII p. 492.

1. Gibberella acerina Massa, Annali di Bot. v. X, 1912, p. 423, tab. 5567 IV fig. 3. — Peritheciis obovatis, piriformibus, v. irregulariter subglobosis, majusculis, vertice papillatis, contextu fusco-violaceo confertissimis, caespitulos 2 mm. et ultra formantibus, subsuperficialibus, basi stromate celluloso purpureo-fusco carnoso insidentibus; ascis oblongo-clavatis, stipitatis octosporis, plerumque 80 × 18; sporidiis subdistichis rectis oblongo-fusoideis, obtusis, triseptatis septis constrictis, 24 × 7, hyalinis; paraphysibus nullis.

Hab. in ramis corticatis Aceris campestris (Aceraceae), Vercelli, Italiae bor. (CESATI, 1842) — G. pulicari (Fr.) et G. moricolae (De Not.) affinis.

2. Gibberella creberrima Syd., Enum. Philipp. Fungi II, in Philipp. 5568
Journ. of Soi. VIII (1913) p. 493. — Peritheciis gregariis, saepe
seriatim dispositis, superficialibus, caulem longe lateque obtegentibus, caespitoso-confluentibus et concrescentibus, coriaceo-submembranaceis, leniter verrucosis, ovoideis, demum apice cupuliformiter
collapsis, baši contracta saepe subpedicellatis, atris, 150-275 ×
120-200, papillatis, contextu parenchymatico pallide violaceo e cellulis 8-12 μ diam. composito; ascis clavatis, sessilibus, 70-100 ×
12-20, octosporis, indistincte paraphysatis; sporidiis oblique monostichis vel saepius distichis, ellipsoideo-oblongis, utrinque rotundatis, 3-septatis, ad septa non constrictis, hyalinis, guttulatis, 1822 × 7-9.

Hab. in caulibus vivis Scleria e sp. (Cyperaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (BAKER).

3. Gibberella longispora A. Maublanc, Bull. Soc. Mycol. de Fr., XXXVI, 5569 1920, p. 37, tab. III fig. 9-13. — Maculis diffusis, castaneis. Stromatibus minutis (circ. 0,5 mm. diam.), gregariis, et secundum lineas longitudinales dispositis, erumpentibus superficialibusque, rugulosis, coriaceis, intus pallidis, cortice atro purpurea praeditis, contextu celluloso. Peritheciis e stromatibus oriundis, demum subliberis, globosis, circ. 200 μ diam., poro apicali non exserto praeditis, tunica 40-60 μ crassa, cum stromatem confluente; ascis fusoideo-clavatis, mox diffluentibus, 60 × 15, aparaphysatis (?). Sporidiis in ascis fasciculatis, fusiformi-oblongis, rectis vel paulo curvulis, continuis, dein medio tenuissime 1-septatis, demum 2-3-septatis, utrinque obtusiusculis, sed mox in ascis apiculo brevi, obtuso, subapicali praeditis, hyalinis guttulatis granulosisque, 35-48 × 4-4,5. Stromatibus conidiiferis. (Fusarium) immixtis, erumpentibus, obscure purpurels, pulvinatis, cellulosis; sterigmatibus ad apicem cellula-

rum superficialium verticillatis, elongatis; conidiis acrogenis, primum rectis, dein praesertim ad apicem arcuatis et interdum fere hamatis, sursum acutiusculis, basi obtusis et subtruncatis, continuis, dein 2-3 tenuissime septatis, hyalinis, guttulatis, 40-50 × 3.

Hab. in foliis Olyrae sp. (Graminaceae), Rio de Janeiro, Brasiliae.

4. Gibberella briosiana Turconi et Maffei, Rendic. Accad. Lincei, ser. 5570 5ª XXI (1912) p. 248 et in Atti Ist. Bot. Pavia XV p. 148, tab. V fig. 9-17 (extr. 1912). - Peritheciis rariter binis aut paucis, plerumque compluribus, botryose aggregatis atque in acervulos erumpentes verruciformes congestis, ovatis vel ovato-globosis, 200-250 u diam., contextu celluloso parenchymatico atro-cyaneo, hypostromate quoque parenchymatico caerulescente insidentibus; ascis cylindraceis vel cylindraceo-subclavatis, breve pedicellatis, 80.100 × 18.20. octosporis, aparaphysatis; sporidiis distichis, obovatis vel ellipsoideis, triseptatis, ad septa non vel leniter constrictis, 16-20 \* 6-8, hyalinis. - Adest status conidicus formam Fusarii sistens; sporodochiis mox erumpentibus, pulvinatis, rotundatis vel ellipsoideis, vel etiam sublinearibus, quandoque in series longitudinales 1-2 cm. longas confluentibus, pallide carneis; conidiophoris verticillatim ramosis; conidiis acrogenis, fusoideis, curvatis, utrinque acutatis, plerumque 3-5-rarius 6-septatis, hyalinis, 40-60 × 4-6.

Hab. in ramulis Sophorae japonicae (Leguminosae), cui noxium, in horto botan. Ticinensi, Italia bor.

5. Gibberella pulicaris Rick.— Sacc., Syll. II p. 552 — var. subtropica 5571 Rehm in Theissen, Ann. Mycol. IX, 1911, p. 63.— Peritheciis 215-260 × 175-190; ascis clavatis 58.72 × 12-13; sporis quadrilocularibus demum septo constrictis, 20-26 × 5-5,5; conidiis curvulis, 5-7 septatis, 42-55 × 5.

Hab. in ramulis putrescentibus, Rio Grande do Sul, Brasiliae.

6. Gibberella rugosa T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. Peradeniya v. VII, P. II, 1920, p. 136.— Peritheciis solitariis v. usque 6 aggregatis, erumpentibus stromate superficiali destitutis, basi quandoque mycelio albido tenui praeditis, minutis 0,15 mm. diam., ovoideis v. clavatis, rugoso verrucosis, nigris v. coeruleis, parietibus obscure violaceis, ostiolo non prominenti; ascis ovato-clavatis, octosporis 64-72 × 14-18; sporidiis distichis e anguste-ovoideis subcymbiformibus, 3-septatis septo non constrictis, utrinque rotundatis, hyalinis, 18-24 × 6-8 raro 32 × 8.

Hab. ad ramos dejectos, Peradeniya, Ceylon, Asia.

## Sect. 7. Hyalodictyae

PLEONECTRIA Sacc. — Syll. II p. 559, IX p. 990, XVII p. 814, XXII p. 493.

1. Pleonectria heveana Sacc., Notae Mycol. XXIV p. 13 (Bull. Orto 5573 bot. Napoli 1918). — Peritheciis gregariis v. subsparsis v. paucis acervulatis, superficialibus, globulosis, circ. 1/4 mm. diam., mox collabescendo umbilicato-scutellatis, fusco-sanguineis, contextu parenchymatico, rubescenti; ascis crasse clavatis, apice obtuse tenuatis, infra sensim brevissime stipitatis, aparaphysatis, 65 70 × 12, octosporis; sporidiis ovato-oblongis, 3-5-septato-muriformibus. 17-18 × 8, hyalinis, ad septa non v. vix constrictis.

Hab. in cortice truncorum putrescenti Hevene brasiliens is (Euphorbiaceae) cultae, Singapore (BAKER) — Ab affini Pleon. berolinensi differt ascis clavatis, sporidiis distichis, 2-5-septato-muralibus.

2. Pleonectria appendiculata Vouaux, Bull. Soc. Mycol. de Fr., 1912, p. 5574
193.— Peritheciis numerosis, sparsis, superficialibus, pallide aurantiacis, sphaeroideis v. ovoideis supra obtuse conoideis, 125-150 μ lat. 150-300 μ altis, ostiolo simplici saturatius colorato, contextu plectenchymatico prosenchymatico ex hyphis 3-6 μ cr. formato; ascis cylindraceis breviter pedunculatis, octosporis, saepe etiam esasporis, v. tetrasporis, 68-140 × 13-17; paraphysibus valde irregularibus mox evanidis, roseolis; sporis monostichis, irregularibus hyalinis primum 1-dein 3-septatis demumque septo longitudinali plus minus evoluto praeditis; ad septa constrictis, ovoideis v. late fusoideis, rectis v. curvulis, multiguttulatis, 20-23 × 9 12, utrinque appendice filiformi recta v. curvula, 4-12 × 1, post maturitatem evanida donatis.

Hab. in thallo tenui ignoto ad truncos vetustos Quercinos prope Docelles Vosges, Gallia (HARMAND).— Paranectriae affinis (Desm.) Sacc. proxima.

3. Pleonectria riograndensis Theissen, Ann. Mycol. IX, 1911, p. 64, tab. 5575 V fig. 30, 31, VI fig. 53. — Peritheciis discretis, gregariis, prorumpentibus, globosis, asperalis, rubris, 420-480 μ diam. primo papilla rotundata praeditis, dein umbilicatis, collabescentibus; ascis juvenilibus elongatis tenuibus, maturescentibus clavatis, plus minusve pedicellatis, p. sp. 75 × 25, sporis oblique dispositis, pedicello tenui, 30-40 μ longo, abrupte in clavam dilatato, vel magis aequaliter elongatis usque 100 × 16, sporis recte distichis et tunc fere

sessilibus; sporis ellipsoideis, utrinque obtusissime rotundatis, hyalino-viridulis, muriformibus, septis tamen indistinctis, 24-30 \* 10-13.

Hab. in cortice cujusdam, Sao Leopoldo, Rio Grande do Sul, Brasiliae (RICK).

MEGALONECTRIA Speg. — Syll. V p. 560, IX p. 992, XVI p. 599, XVII p. 815, XXII p. 495.

Megalonectria pseudotrichia (Schw.) Speg. — Syll. Fung. II p. 660. — 5576
 var. oligospora Sacc., Philipp. Journ. of Sc. Manila, P. I. 1921, p. 599. — Ascis tetrasporis, 90-105 × 18; sporidiis 30-35 × 12, cribroso-6- ad 7-septatis, dilutissime fuscis.

Hab. in cortice indeterm., Cina.

## Sect. 8. Scolecosporae

OPHIONECTRIA Sacc. — Syll. II p. 563, IX p. 994, XI p. 365, XIV p. 651, XVI p. 601, XVII p. 815, XXII p. 497.

1. Ophionectria lagunensis Sydow, Ann. Mycol., 18., 1920, p. 100. — 5577 Mycelium superficiale ex hyphis longiusculis simplicibus septatis dilutissime fuscidulis 4-5 μ crassis compositum; perithecia in mycelio superficialia, basi hyphulis mycelii circumdata ibidemque hyphulis aliis dilutissime fuscidulis vel subhyalinis obtusis brevioribus laxe obsita, ceterum glabra, levia, plus minus dense gregaria, ovato-globosa, usque 350 μ alta, 240-280 μ lata, pallide ochracea, in sicco obscuriora, vertice obtusa, non ostiolata, contextu tenui e cellulís 12-16 μ diam. composito; asci tereti, brevissime stipitati, 100-130 × 16-18, ad apicem obtusi, 8-spori; sporae fusoideo-aciculares, utrinque acutiusculae, hyalinae, 6-10-septatae, 45-60 × 2-3.

Hab. in ramis emortuis Homonoyae ripariae (Euphorbiaceae), Mt. Maquiling, Laguna, Ins. Philippin. (O. D. REINKING).

2. Ophionectria erinacea Rehm, Ascomyc. Philipp. I in Philipp. Journ. 5578 of Sci VIII (1913) p. 182. — Peritheciis in maculis epiphyllis vix conspicuis latissime flavidulis botryose 3-10 arcte congregatis sessilibus, globulosis, 100 μ latis, hyalinis, parenchymatice contextis setis plurimis, rectis, subacutatis, non septatis, glabris, crasse tunicatis medio canaliculatis, 50-100 τ 5-6, inprimis ad apicem obsessis; ascis cylindraceo-clavatis, apice rotundatis, sessilibus, crasse tunicatis, octosporis, usque ad 100 τ 12; sporidiis subacicularibus, utrinque valde acutatis, subcurvatis, hyalinis, 10-12-cellularibus, usque ad 70 τ 3, parallele positis; paraphysibus filiformibus ad api-

cem ramosulis, hyalinis, 1,5 µ crassis.

Hab. in foliis vivis Bambusae Blumeanae (Graminaceae), Luzon, prov. Laguna, Los Baños, ins. Philipp. (C. F. BAKER).

3. Ophionectria Palmarum Torrend, Champ. Congo belge, in Bull. Jard. 5579 Bot. Bruxelles IV, 1 (1913) p. 8. — Peritheciis gregariis, sessilibus, globulosis, ochraceis vel flavido-melleis, 200 μ diam., ad maturitatein aureo-furfuraceis; ascis fusoideis, 50-70 × 16, indistincte paraphysatis; sporidiis lineari-fusoideis, longitudinaliter parallelis vel subdistichis, 40-45 × 4-5, extra ascum saepius curvulis, 4-5-septatis, hyalino-viridescentibus.

Hab. ad folia et fragmenta Palmarum, Kisantu, Congo (H. VANDERYST).

#### TRICHONECTRIA Kirschst. - Syll. XXII p. 498.

1. Trichonectria bambusicola Rehm, Ascomye, Philipp. V, Leaflets of 5580 Philipp. Botany, VI (1914) p. 2226. — Peritheciis in hypophyllo dilute flavido-maculato caespitose 6-8 arcte congregatis, globulosis, haud perspicue ostiolatis, hyalino-roseolis, 100 μ diam, parenchymatice tenuiter ex cellulis 9 μ circ. latis contextis, setis plurimis rectis, obtusis, hyalinis, non septatis, 90 μ usque longis, 9 μ cr. obsessis; ascis cylindraceis, apice rotundatis, 100-120 × 12; paraphysibus ramosis 1 μ circ. crassis; sporidiis acicularibus, apice superiore obtusis, rectis, hyalinis, 5-7-septatis, parallele dispositis, 80 × 2.

Hab. in foliis Bambusae Blumeanae (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (S. A. REYES).

- TRAILIA Sutherland, Trans. Brit. Myc. Soc. V pt. I, 1914, p. 149 (1915).—
  Stroma nullum. Perithecia simplicia, matrice immersa, mollia, alba
  vel pallida, ostiolo longissimo, anguste cylindraceo, recto vel curvato instructa. Asci cylindracei octospori aparaphysati. Sporidia
  hyalina, filiformia, fastigata, septata, in asco duplicata contortaque.
- 1. Trailia Ascophylli Sutherl., l. cit., tab. 3 fig. II. Mycelio hyalino; 5581 peritheciis confertis vel sparsis, thallo regionibus inaequaliter atris factis immersis, subglobosis v. clavatis, 50-60 μ diam., mollibus, albis, ostiolo longissimo, angusto, recto v. curvato, 300-450 × 7,5-10,5; ascis cylindraceis, contortis, octosporis, 45-50 × 9, aparaphysatis; sporidis hyalinis, filiformibus, in exilitatem fastigatis, septatis, ascum duplo longioribus et igitur in asco duplicatis contortisque.

Hab. in thallo Ascophylli nodosi (Algae), Orkney, Scotia.

# 00MYCES B. et Br. - Syll. II p. 564, XVI p. 606, XXII p. 501.

1. Oomyces caespitosus Syd., Ann. Mycol. 14., 1916, p. 86.—Stroma-5582 tibus dense caespitosis et greges 1-2,5 cm. longos culmum ambientes formantibus, oblongis, erectis, usque 1 ½ mm. longis, apice parum attenuatis, ochraceo-flavis vel obscure ochraceo-flavis, carnosis, perithecium unicum elongatum includentibus; ascis cylindraceis, aparaphysatis, apice obtusis et hyalino-calyptratis, 350-400 × 18-30, 6-8-sporis, sporidiis filiformibus, rectis vel flexuosis, 30-45-septatis, non constrictis, hyalinis, utrinque obtusis, 250-350 × 4,5-6,5, loculis non secedentibus.

Hab. in culmis Gaduae Weberbaneri (Graminaceae), Seringal, Auristella, Rio Acre, Peruvia.

# TORRUBIELLA Bond.— Syll. IX p. 994, XI p. 365, XVII p. 816, XXII p. 502.

Torrubiella tomentosa Pat. — Syll. XI p. 365. — var. citrina Pat., 5583
 Bull. Soc. Mycol. de Fr., 1913, p. 226. — A typo differt colore citrino et peritheciis forma ovoidea donatis.

Hab. ad Coccidas in foliis dejectis Bambusae (Graminaceae), Chi Né Tonkin, Cinae (Duport).

## MICRONECTRIA-Speg. - Syll. IX p. 996, XVI p. 602.

1. Micronectria montenegrina Bubàk, III Beitr. Pilz. Montenegro, in 5584 Botanikai Közlemènyek, 1915 (p. 53). — Peritheciis cortici immersis, eum et epidermidem pustuliformiter elevantibus, dein apice globoso-conico, furfuraceo erumpentibus, applanato conicis, ca. 0,5 mm. in diam., contextu molli, basi tenui, subhyalino, apice crasso, extus atro-viridi, intus viridi usque subhyalino, plectenchymatico; ascis cylindraceis, usque 200 × 8 10, crassiuscule tunicatis, apice rotundatis et parum incrassatis, basi breve pedicellatis, octosporis; sporidiis filiformibus, usque 180 × 1-1,25 septatis, hyalinis, paraphysibus creberrimis, sporis simillibus obvallatis.

Hab. ad caules emortuos Euphorbiae tinctoriae (Euphorbiaceae), Njegusi, Montenegro.

2. Micronectria Eugeniae T. Petch, Hypocr. zeyl. in Ann. R. Bot. Gard. 5585 Peradeniya v. VII P. II, 1920, p. 137.— Maculis flavis ostiolis albis signatis; peritheciis hypophyllis mesophyllo immersis, epidermidem elevantibus sed non erumpentibus, sparsis, globosis, v. lateraliter ovoideis, supra conoideis 0,15 mm. diam.; parietibus crassis flavis v. flavo-brunnescentibus demum prope ostiolos brunneo-

nigricantibus; ascis oblongo-clavatis apice truncatis breviter pedicellatis, octosporis,  $120 \times 12$ , sulcatulis, paraphysibus linearibus apice quandoque inflatis obvallatis; sporidiis parallele fasciculatis, hyalinis linearibus apicibus truncatis, obscure septatis,  $80.96 \times 2$ .

Hab. in foliis Eugeniae sp. (Myrtaceae), Hakgala, Ceylon, Asia.

HYPOCRELLA Sacc. \*) — Syll. II p. 579, IX p. 1002, XI p. 367, XIV p. 653, XVI p. 603, XVII p. 817, XXII p. 503.

1. Hypocrella disjuncta Seaver, Mycologia 12, 1920, p. 97.— Stroma- 5586 tibus tuberculatis basi leniter constrictis maturis pallide griseis; ascis apice capitatis ad medium inflatis; sporidiis juventute filiformibus sed mox in asco articulatis et disjunctis et tunc ascis apparenter polysporis.

Hab. in foliis Bignoniae unguis (Bignoniaceae), Naguabo Porto Rico (J. R. Johnston et J. A. Stevenson).

2. Hypocrella melaena Syd., Enum. Philipp. Fungi II, in Philipp. Journ. 5587 of Sci. VIII (1913) p. 494. — Stromatibus hypophyllis, ad nervos evolutis, solitariis vel saepius aggregatis et confluentibus, magnis, rotundatis, pulvinatis, 2-8 mm. diam., confluendo subinde etiam majoribus, lata basi sessilibus, quoad crassitudinem variabilibus, sive planis sive medio plus minusve convexis, levibus, glabris, aterrimis, opacis, intus albido-lignosis; peritheciis monostichis, omnino immersis, globoso-conicis, 150-225 μ diam., in quoque stromate numerosissimis; ascis cylindraceis vel clavato-cylindraceis, apice rotundatis, deorsum pedicellatis, 120-145 × 8-14; sporidiis mox jam in asco in segmenta secedentibus, articulis 6-9 × 1-1,5, hyalinis.

Hab. in foliis Dilleniae philippinensis (Dilleniaceae), Luzon, Prov. Laguna, San Antonio, ins. Philipp. (RAMOS). — Species peculiaris, facile dignoscenda.

Hypocrella caulium (Berk. et Curt.) Pat., Bull. Soc. Mycol. Fr. 1914, 5588
 p. 346. — Huc ducenda est Hypocrella camerunensis Henn. — Syll.
 XIV p. 654. — quae nil est nisi status evolutus Corticii caulium Berk. et Curt. — Syll. VI p. 612.

Hab. in caulibus Filicum (Filices), Doungou et ad ramulos

<sup>\*)</sup> Quoad genera Hypocrella et Aschersonia cfr. PETCH, The genera Hypocrella and Aschersonia a preliminary Note, in Ann. of R. Bot. Garden Peradeniya, Sept. 1914.

indefinitos, Lizanga, Congo, Africa trop., parasitice ut videtur Coccidearum.

4 Hypocretla vilis Syd., Ann. Mycol. 15., 1917, p. 215. — Stromata 5589 epiphylla, sparsa rotundata, minuta, 0,5-1 mm. diam., flavida, leniter convexa, subicule membranacco, albido cineta; perithecia ubique in stromate evoluta, numerosa, immersa, ostiolis obscure rufosuccineis prominentibus; ascis tenuibus, cylindraceis, 4-5 μ crassis; sporae facillime jam in asco in segmenta oblonga vel oblongo-cylindracea, 5-6 μ longa 2 μ lata, hyalina secedentes.

Hab in foliis Schizostach y i sp. (Graminaceae), Angat pr. Bulacan, Luzon, Ins. Philipp. (M. RAMOS).

5. Hypecrella phyliophila Theissen, Ann. Mycol. IX, 1911, p. 66, tab. 5590 V fig. 51, VI fig. 54. — Stromatibus 0,5-1 mm. diam. primo griseis, dein brunneis, nigrescentibus, amphigenis, plerumque hypophyllis, sessilibus, sphaeroideis v. latiore basi affixa hemisphaericis; superficie peritheciis maturis acute subprominentibus, colliculoso-scabris, intus farctis, albo-cremeis, durinsculis, pseudo-epidermide exhyphis densius contextis formata brunnea, 40-50 μ cr.; peritheciis ovato-botuliformibus, usque ad 450 × 200, parietibus in sectione rubro-brunneis; ascis cylindraceis v. e medio tumidulo in utrimque partem sensim attenuatis, 150-180 × 8-10,5, operculo. delicatissimo; sporis filiformibus, mox in articulos bacillares, utrinque rotundatos, 8 μ longos secedentibus.

Hab. in foliis Myrtaceae, Sao Leopoldo Rio Grande do Sul, Brasiliae (RICK). — Differt ab H. ochracea colore, insertione stromatum, articulisque sporarum minoribus.

6. Hypocrella plana Sydow, Engler' Botan. Jahrbüch., 54., 1916, p. 5591 257. — Stromatibus albis, dein ochraceo-flavidis, planis, tenuiter discoideis, singulis orbicularibus, 2-4 mm. piam., sed saepe confluendo majoribus et irregularibus, ca. ¹/₃ mm. tantum crassis, ostiolis minutissimis flavo-brunneis vix visibilibus punctatis; peritheciis omnino immersis, ovoideis, minutis, ascis cylindraceis 5-7 μ latis, octosporis, aparaphysatis; sporidiis fliformibus, longitudine ascorum, extra ascos in articulos cylindraceos 6-8 v 1-1,5 hyalinos secedentibus.

Hab. in foliis vivis Piperis sp. (Piperaceae), ad flum. April, Nova Guinea nord-or. Africae (LEDERMANN).

7. Hypocrella libera Syd., Ann. Mycol. 14., 1916, p. 85. — Stromatibus 5592 in Coccidis parasiticis, lenticularibus vel irregularibus, sed haud globulosis, planiusculis, 2-6 mm. diam., hinc inde confluentibus,

ochraceis; peritheciis numerosis in quoque stromate et valde exsertis, fere omnino liberis elongatis, medio ventricosis, 0,5-1 mm. longis, in media parte  $^{1}/_{3}$ - $^{1}/_{2}$  mm. crassis, ochraceis; ascis cylindraceis, apice obtusis, et hyalino-calyptratis, 300-350  $\approx$  10-15, octosporis; sporidiis filiformibus, hyalinis, jam in asco in articulos numerosissimos oblongos vel oblongo-fusoideos utrinque leniter attenuatos, 13-17  $\mu$  longos 2-3  $\mu$  latos, secedentibus.

Hab. in Coccidiis (Insecta) ad folia dejecta, Cobija, Rio Acre Bolivia (E. ULE).

8. Hypocrelia ambiens Theissen, Ann. Mycol. IX, 1911, p. 69, tab. V 5593 fig. 42, VII fig. 71.— Stromatibus tuberculatis, ramulum plus minusve ambientibus, pluribus arcte aggregatis et fere connatis, 3-10 mm. diam., extus nigerrimis opacis, ob ostiola prominula dense dilateque asperulis et ob mammillas irregulariter hinc inde extantes crassius colliculosis, intus farctis albis, aetate vero lignicoloribus, plus minusve eroso-excavatis; peritheciis immersis botuliformibus, collo longiusculo, usque 350 μ long. (ipsâ perithecii cavitate ca. 240-280 × 170-190), stratum pseudo-epidermale nigrum, 35-40 μ cr. perforantibus; ascis anguste cylindraceis 145-165 × 6-7, operculo minutissimo hemisphaerico; sporis filiformibus, in asco in articulos 8-10,5 μ long., utrinque angustato-rotundatos secedentibus.

Hab. in ramis siccis, Rio Grande do Sul, Brasiliae.

- 9. Hypocrella turbinata (Berk.) Seaver, de qua cnfr. Cl. SEAVER in 5594 Mycologia 12., 1920, p. 96.
- 10. Hypocrella sphaeroidea Sydow, Engler' Botan. Jahrbüch. 54., 1916, 5595 p. 256. Stromatibus globulosis vel applanato-globosis, 3-7 mm. diam., compactis, pulvinatis, sordide flavis, vel flavo-brunneis, superficie primitus leniter pulverulentis; ostiolis minutissimis, subatris; peritheciis omnino immersis, ubique dense aequaliterque dispositis, globulosis, exiguis, 80-100 μ diam., collo minuto praeditis, usque 150 μ altis. distiche stipatis; ascis cylindraceis, 70-130 × 9-12, aparaphysatis; sporidiis jam in asco in articulos oblongos utrinque obtusos continuos hyalinos 5-8 × 2 secedentibus.

Hab. in ramulis plantae ignotae, « Felsspitze » Nova Guinea nordor., Africae (LEDERMANN).

11. **Hypocrella insignis** Sydow, Engler' Botan. Jahrbüch. 54., 1916, p. 5596 256. — Stromatibus superficialibus, sessilibus planis, discoideis, ambitu orbicularibus, 0,5-1,5 cm. diam., centro <sup>3</sup>/<sub>4</sub>-1 mm. crassis, marginem versus <sup>1</sup>/<sub>2</sub> mm. tantum crassis, vivide cinnabarinis, subtus luteo-ochraceis, areola minuta centrali 1-2 mm. lata matrici affixis,

carnosis, intus pallidis; peritheciis ubique plus minus aequaliter distributis, densiuscule stipatis, globulosis vel irregularibus, basi 200-400  $\mu$  diam., superne in collum breve attenuatis; ostiolis minutissimis, exiguis, non vel vix prominentibus, subatris; ascis cylindraceis, ad apicem rotundatis,  $140\text{-}200 \times 10\text{-}15$ , octosporis, aparaphysatis; sporidiis filiformibus, ascum longitudine aequantibus, in eodem asco mox in articulos cylindraceos 5-8  $\mu$  longos, 1,5 latos secedentibus; conidiis simul praesentibus acicularibus, continuis, utrinque acutis, hyalinis, 9-11  $\times$  1; basidiis dense stipatis, hyalinis, 10-16  $\times$  1.

Hab. ad folium dejectum, Lordberg, Etappenberg, Nova Guinea nord-or., Africae (LEDERMANN).

12. Hypocrella aurea Sydow, Engler' Botan. Jahrbüch. 54., 1916, p. 5597 256. — Stromatibus amphigenis, sparsis, irregulariter hemisphaericis usque globulosis, pulvinulatis, <sup>3</sup>/<sub>4</sub>-2 mm. diam., saepe leniter lobulatis, vivide aureis; peritheciis ovatis, omnino immersis, minutis, ostiolis obscure rufis; ascis cylindraceis, 130 160 × 9-12, aparaphysatis; sporidiis jam in asco in articulos breviter cylindraceos, continuos, hyalinos, 4-7 μ longos 2 μ latos, secedentibus.

Hab. in foliis vivis fruticis cujusdam, « Felsspitze » Guinea nordor., Africae (LEDERMANN).

- Hypocrella orbicularis Sydow in Theissen, Ann. Mycol. IX, 1911, 5598
   p. 67. Ita vocanda est Hypocrella globosa Sydow (20 sept. 1907)
   nec Raciborski (9 jan. 1907).
- 14. Hypocrella nutans (Rick) Theissen, Ann. Mycol. IX, 1911, p. 67. 5599
  Ita vocanda est Mölleriella nutans Rick.
- HYPOCREOPHIS Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. Cienc. Cordoba, t. 23., 1919, Extr. p. 118. Stroma superficiale discoideo-scutellatum sessile v. stipitatum carnoso-subceraceum, laeticolor, peritheciis disco supero immersis ac dense constipatis, ostiolis vix prominulis, ascis linearibus aparaphysatis 8-sporis, sporis linearibus pluriseptatis hyalinis, articulis non dissilientibus. Est Hypocreu scolecospora.
- 1. Hypocreophis guaranitica Spegaz., l. c. cum icon.— Stromata superficialia extus sordide flavida, intus alba, orbicularia sessilia, 5-10 mm. diam., superne plana sed centro saepius eximie umbonato-mucronata, punctibus ostiolaribus obscurioribus confertis notata, inferne convexula glaberrima, margine rotundata integra; peritheciis minutis elliptico-subglobosis 200-250 \* 120-150, tunica tenuiter mem-

branacea vestiti, ochroleuci; asci apice subglandiformes, basi breviter tenuiterque attenuato-pedicellati,  $200 \times 9-10$ ; sporae lineari-subclavulatae, parte media supera crassiore apiceque obtuse rotundata, infera sensim angustiore apiceque acuta, 7-15-septata,  $60-100 \times 3-5$ .

Hab. ad cortices dejectos putres Tabebuiae sp. (Bignonia-ceae), prope San Lorenzo, Paraguay, America austr. trop. (J. D. Anisitz).

EPICHLOË Tul.— Syll. II p. 578, IX p. 1001, XI p. 367, XIV p. 655, XVI p. 607, XXII p. 507.

1. Epichloë warburgiana Mag. — Syll. XI p. 367.—var. Donacis Rehm, 5601 Ascomyc. Philipp. V, Leaflets of Philipp. Botany, VI (1914) p. 2225. — Stromatibus cylindraceis, apice obtusis, fusco-nigris, subaugulosis, crustaceis, 0,5-2 cm. longis, 8 mm. latis, inflorescentiam ambientibus et destruentibus, intus albescentibus; peritheciis innatis, globulosis, ostiolo non emergente sed potius umbilicato, 20-30 μ lato praeditis, in stromate ex hyphis tortuosis, septatis, brunneis, 5 μ latis contexto nidulantibus; ascis cylindraceis (interdum fusiformibus) apice rotundatis, aparaphysatis, 120 × 10-12; sporidiis filiformibus, septatis, hyalinis, paral·lele dispositis, asci-longitudinis, jam in asco in cellulas cylindraceas, 8-10 × 2, plurimas dissolutis.

Hab. ad inflorescentiam Donacis cannaeformis (Graminaceae), Luzon, Prov. Laguna, Los Baños, ins. Philipp. (M. B. RAIMUNDO).

BALANSIA Speg. — Syll. IX p. 999, XI p. 366, XIV p. 656, XVI p. 607, XVII p. 821, XXII p. 509.

1. Balansia Cyperi C. W. Edgerton, Mycologia, 11., 1919, p. 260, tab. 5602 12. — In floribus evoluta, sclerotiogena, sclerotiis stipitatis v. sessilibus 1-3 cm. long. demum nigris, induratis papillatis; conidiis e conidiophoris brevibus angustis confertis sclerotiicolis efformatis, rectis v. curvulis, longis, angustis, hyalinis, 15-30 × 1-1,8; peritheciis ampullaeformibus collo elongato emergenti praeditis, 480-600 × 120-200; ascis elongatis, angustatis, plerumque rectis sed quandoque etiam curvulis, 160-225 × 7-10; sporis longis, angustis, hyalinis septatis, 100-200 × 1,5-2.

Hab. in inflorescentis Cyperi virentis (Cyperaceae), St. Gabriel Louisiana, Amer. bor. (A. T. BELL et C. W. EDGERTON).

2. Balansia nidificans P. et H. Syd., Ann. Mycol. X, 1912, p. 81. — 5603

Stromatibus in spicis evolutis, spicis infectis 5-11 mm. long. 2-3 mm. cr. in massam sclerotioideam perduram atram trasmutatis; stromatibus hemisphaericis v. depresso-globosis, 0,5-1 mm. diam., subsessilibus v. basi contracta matrici affixis, duris, atris, dense minuteque granuloso-tuberculatis; peritheciis immersis; ascis cylindraceis ca. 100-150  $\mu$  long.; sporidiis ascorum longitudine,  $^3/_4$ -1  $\mu$  cr., extra ascos facile in articulos 9-12  $\mu$  long. secedentibus.

Hab. in spicis Cyperaceae, inter Muarah Uja et Kundim baru, Borneo sud-or. (H. WINKLER). — Stromate minuto distincta species. Spicis infectis subproliferis.

3. Balansia Andropogonis Syd. et Butl., Ann. Mycol. 1X, 1911, p. 395.— 5604 Stromatibus in inflorescentiis lignoso-fibroso-mutatis insidentibus, sparsis v. aggregatis, depresso-hemisphaericis v. subdiscoideis 1-2. mm. diam., sessilibus, extus atris, intus pallidis, duriusculis, levibus, vix sub lente valida minute denseque punctulatis; peritheciis obovatis, minutis, immaturis.

Hab. in inflorescentiis Andropogonis aciculati (Graminaceae), Forbesganj, Purnea, Bengalen, India or. (J. H. BURKILL).

4. Balansia asperata Massee, Bull. Bot. Gard. Kew, 1911, p. 225, fig. 5605 1-7. — Stromatibus stipitatis, hemisphaericis vel subglobosis, infra umbilicatis, asperatis, extus atris, 1 mm. diam.; stipite cylindrico, lignoso carnosulo, duriusculo, extus atro, sub lente minute squamuloso, 2 mm. circ. longo; peritheciis in stromatis capitulis periphericis, densissime constipatis; ascis cylindraceis, 100-200 ≈ 7-8, basi attenuatis; sporidiis filiformibus, longitudinem ascorum aequantibus, multiseptatis, hyalinis.

Hab. in inflorescentia Ichnanthi pallentis (Gramina ceae), Mount Austin, Johor, Penins, Malacca (RIDLEY). — Affinis B. Jungneri P. Henn. sed in omnibus partibus minor.

5. Balansia sessilis Massee, Bull. Bot. Gard. Kew, 1911, p. 225, fig 8-10. — Stromatibus sessilibus, globulosis, subtus plus minusve angustatis, duris, extra atris et minutissime punctulatis, intus albidis, 1,5-2,5 mm. diam.; peritheciis in stromate periphericis, densissime constipatis, oblongo-ovatis; ascis cylindraceis, 200-220 × 10-12, tunica apice valde incrassata, basi leniter attenuatis, aparaphysatis; sporidiis filiformibus, longitudinem ascorum fere attingentibus, hyalinis, multiguttulatis dein multiseptatis.

Hab. in inflorescentia I chnanthi sp. (Graminaceae), Johor: Batu Pahat in penins. Malaccense (RIDLEY).

6. Balansia Trichloridis Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5607

Buenos Aires XXIII (1912) p. 96. — Stromatibus discoideis, sessilibus, matrici vix incrassata leniterque infuscata gregarie insidentibus, parvis, 1-3 mm. diam., planiusculis, non vel vix rugulosis, extus intusque atris, non nitidis, contextu opaco indistincto; loculis ellipsoideo-globosis, confertis, erectis, 200-250 × 120-200, obsolete papillato ostiolatis; ascis cylindraceis, longissimis, 200 × 6, apice rotundatis crasseque tunicatis, basi breviuscule graciliterque pedicellatis, aparaphysatis, octosporis; sporidiis filiformibus, utrinque acutiuscule rotundatis, rectis vel leniter flexuosis, non vel minute multiguttulatis, hyalinis, 120-150 × 1.

Hab. iu culmis vivis Trichloridis mendocinae (Graminaceae, circa Mendoza, Argentina. — Species Plowrightiae habitu simillima, sed ascorum sporarumque fabrica distinctissima nec quidem comparanda.

- OPHIODOTHIS Sacc. Syll. II p. 552, IX p. 1051, XIV p. 685, XVI, p. 632, XVII p. 859, XXII p. 442. De hoc cnfr. Theiss. et Syd., Ann. Mycol., 13, 1915, p. 187.
- 1. Ophiodothis Elymi Gz. Frag., Fungi Hort. Madrit. p. 21 fig. 2 (1917). 5608 Stromatibus superficialibus elongatis, usque ad 1 mm. long., nigris, loculis immersis 1-4 majusculis, 175-350 μ diam., parietibus mediis tenuibus, distincte papillatis, poro pertusis; ascis longe cylindraceis, stipulatis, apice rotundatis 140 × 10, paraphysibus filiformibus; sporidiis fasciculatis filiformibus, rectis v. subflexuosis, ascos subaequantibus, parce septulatis, loculis majoribus pluriguttulatis, loculis inferioribus facile secedentibus.

Hab. in culmis siccis Elymi philadelphi (Graminaceae), in Horto bot. Madrid, Hispaniae (A. CABALLERO). — Ab Opiodothide atro-maculanti diversa.

2. Ophiodothis Picramniae Speg., Mycet. Argent. VI, Anal. Mus. Nac. 5609 Buenos Aires XXIII (1912) p. 95. — Stromatibus parenchymate innatis, utrinque perspicuis, repando-angulatis, 1 3 mm. diam., utrinque planissimis, atris, glabris, opacis; loculis hypophyllis, 1-5 in quoque stromate, semilenticularibus, 120-150 μ diam., obsolete ostiolatis, contextu subcarbonaceo, opaco, indistincto; ascis obclavulatis, apice subtruncato-rotundatis crasseque tunicatis, basi brevissime pedicellatis, aparaphysatis, octosporis, 90-100 × 14-16; sporidis 2-3-stichis, rectis vel leniter inaequilateris, utrinque acutiusculis, continuis vel 4-5 blastis, 40-45 × 4-5, primo tunica mucosa hyalina levi vestitis dein nudis.

Hab. in foliis vivis Picramniae palo-amargo (Simarubaceae), prope Puerto Leon, Misiones, Argentina.

**CORDYCEPS** Fr. \*) — Syll. II p. 566, lX p. 998, XI p. 366, XIV p. 656, XVI p. 611, XVII p. 822, XXII p. 510.

1. Cordyceps Puiggari Spegaz., Rel. Mycol. trop. etc. in Bol. Ac. Nac. 5610 Cienc. Cordoba, t. 23., 1919, Extr. p. 116. — Stromata solitaria; stipite subfiliformi praelongo, 30 60 mm., 0,5 mm. diam., simplice recto v. leniter flexuoso, longitudinaliter rugoso-striato fusco-atro opaco, spatio apicali capitulum duplo quadruplove longiore pallide carneo-luteo terminato; capitulo acrogeno solitario eximie elliptico-sublimoniformi parvo, 2·3 \* 1,50-1,75 mm., laevissimo, carneo luteo; peritheciis confertis, horizontali-radiantibus omnino immersis ostiolis etiam plane imperspicuis, 800 \* 100; ascis cylindraceis 250 \* 6-8; sporis filiformibus in articulis teretibus abbreviatis mox dilabentibus, 5-10 \* 1.

Hab. ad cadaver Alleculidei (L y s t r o n y c h u s sp.), inter Bryophytas ad truncos vetustos, prope Apiahy, Brasilia (J. PUIGGARI). — C. australi Speg. et C. thyrsoide Moell. affinis.

2. Cordyceps peltata Wakefield, Kew Bull. 1916, n. 3, p. 74 c. ic. — 5611 Stromate stipitato, stipite ligno omnino immerso, capitulo supra corticem emergente; capitulo peltato, pulvinato, primo pallido, deide rufo-brunneo, margine pallidiore 1-2 processibus sterilibus conicis ad 1 mm. longis praedito, ostiolis obscurioribus vix v. leniter prominulis, punctato, 2-5 mm. v. e fusione 5-7 × 3-4 mm.; stipite brevi pallido e mycelio larvam obtegente oriundo; perithe ciis immersis, circ. 0,25 mm. longis; ascis clavatis, longe stipitatis, p. sporif. 100 × 10; sporidiis hyalinis bacillari-fusiformibus, utrinque acutis, multiseptatis, 72-91 × 3-3,5, saepe medio inflexis maturitate in duos articulos secedentibus.

Hab. parasitica in larvis Cryptorhynchi sp. intra Codie i truncum nidulantibus. — An potius ad Hypocrellae genus referenda species?

3. Cordyceps huberiana P. Henn., Hedw., vol. 48 (1908) p. 105. - Stro- 5612 matibus longe stipitatis, clavula cylindracea, spiciformi, obtusa, 8-9 mm. longa, 1 mm. crassa, flavo-brunneola, stipitibus filiformibus, teretibus, arcuato-flexuosis, rigidis, corneis, atris, levibus, ad

<sup>\*)</sup> Cfr LLOYD, Synops. of the Cordyc. of Australia, Cincinn. March 1915.

apicem brunneolis, ca. 4 cm. longis, 400-500  $\mu$  latis; peritheciis oblongis, omnino immersis; ascis cylindraceis, apice rotundatis, 150-200  $\approx$  5-6; sporidiis filiformibus pluriseptatis 2  $\mu$  crassis.

Hab. in thorace Megaponerae sp. (Formica), Amazonas. Parà. — C. rhizomorphae A. Möll. affinis.

4. Cordyceps japonensis Hara, Bot. Mag. Tokyo v. 28., 1914, n. 332, 5618 cum icon. — Stromatibus solitariis v. caespitosis, simplicibus, flexuosis, subcompressis, carnosis, aurantiacis, 11,5-25 mm. alt. 1-1,5 mm. cr., apice oblongis v. ovoideo-sphaeroideis, rugosis et peritheciis prominulis dense tectis, 2-5 mm. diam.; peritheciis subimmersis, globosis, ostiolatis; ascis longe cylindraceis v. clavatis, apice rotundatis, stipitatis, octosporis, 130-170 \* 5-6; sporis filiformibus, longissimis, pluries septatis, 1,5-2 μ cr., hyalinis.

Hab. ad Formicas varias, Kawauye-mura et Kakumuno-ga-hara Prov. Minq, Japonia.

5. Cordyceps necator Pat. et Har., Bull. Soc. Mycol. Fr. 1912, p. 283. — 5614 Clavula ovoidea, apice apiculata, flavescente, bullata, 1-1,5 mm. longa, 1 mm. lata, in stipitem concolorem, basi nigricantem 3-4 mill. longum, <sup>1</sup>/<sub>3</sub> mill. latum, e rhizomorpha atra ad 3 cm. longa, <sup>1</sup>/<sub>2</sub> mm. crassa, flexuosa, cadaveri formicarum quas enecat inserta nascentem, attenuata; absque ascis et sporis.

Hab. in Formicis emortuis, Guideko, Sassandra, Guineae gallicae, (A. CHEVALIER).

6. Cordyceps Tricentri Yasuda in Lloyd, Myc. Not. 41. p. 568 fig. 775-5615 776 (1916). — Stipite tenui filiformi, 6 cm. longo, 1 mm. cr., capitulo fusoideo, sublevi, 7 × 1,5 mm. nutante stipiteque flavis; peritheciis non prominulis, ceteris notis Cord. nutantis.

Hab. in corpore insecti Tricentri, in Japonia (A. YASUDA).—Praecipue colore stipitis et capituli a C. nutante differt.

7. Cordyceps Clavicipitis Oertegren, Svensk Bot. Tidskr. X (1916) p. 53, 5616 et p. 55 fig. 1-3. — Diagnose p. 57: In sclerotiis Clavicipitis purpureae parasitica; stromatibus nunc simul cum stromatibus Clavicipitis, nunc iis suppressis singularibus, numero saepius plurimis, e sclerotiis nutricibus prorumpentibus, non ramosis, subulatis, cum stipite 15,5-23, typice 21-22 mm. longis, 1,2-2 mm. latis parte sporifera stipite duplo longiore, maturis colore externo croceo, interno griseo vel pallide subflavo, juvenilibus colore externo albido, interno aurantiaco signatis; peritheciis maturis quasi superficialibus, re vera sub velamine tenui valde prominentibus, 325-375 μ longis, 150-185 μ latis, pariete quam textura stromatica firmiore,

e colore atro-griseo; ostiolis longe protractis, flavocinctis, sursum papillulis minutis praeditis; ascis fragilissimis, cylindraceis, tenuissimis, 150  $\mu$  longis, 2,5-3  $\mu$  latis, sursum galericula glandiformi ornatis, hyalinis; sporis 8-nis, asco parum brevioribus, valde tenuissimis, multiseptatis; paraphysibus raris certe inventis.

Hab. e sclerotio Clavicipitis purpureae ovariorum Secalis cerealis, in paroecia Gunnarskog provinciae suecanae Wermland collectis fungis ille fratricida in horto botanico Universitatis Stokholmiae in cultura prodiit.

### ASCOPOLYPORUS A. Möell .- Syll. XVI p. 605, XVII p. 819.

1. Ascopolyporus Puttemansii P. Henn., Hedw. vol. 48 (1908) p. 6. — 5617 Stromatibus subgloboso-tuberosis vel ungulato-polyporiformibus, basi discoidea adnatis, gelatinoso-carnosis, parte superiore convexa flavo-brunnea fuscidula sterili, inferiore fertili applanata, granuloso-ostiolata, 3-4 cm. diam.; peritheciis immersis, confertis, oblongo-cylindraceis, 1,5 mm. circ. longis; ascis cylindraceis, vertice obtuso-rotundatis, 4-sporis, 350-400 × 11-12; sporidiis parallelis, cylindraceis, utrinque rotundatis, pluriseptatis, hyalinis, haud dilabentibus, 280-300 × 4-5.

Hab. in culmis Bambusae (Graminaceae), Rio Grande, S. Paulo, Brasilia. — Ab A. polyporoide notis variis distinctus.

ACICULOSPORIUM Miyake, Bot. Mag. Tokyo n. 259 (1908), Stud. ub. Pilz. Bamb. in Japan, in litt., VI, 1912 (Etym. acicula ob formam sporarum).— Stroma subcartilagineum, album, lanceolatum; stratum fructiferum laterale irregulariter erumpens, laete coloratum. Perithecia uniseriata, lageniformia, immersa, ostiolis emergentibus. Asci 8-spori aparaphysati; sporidia filiformia, hyalina, stratum conidiophorum immersum loculatum astomum, sporulis filiformibus. Mycelium perennans.— Forte teste Cl. MIYAKE, cum gen. Loculistroma (Patters., Syll. XXII p. 493) imperfecte descripto congruit.

1. Acieulosperium Take Miyake, Bot. Magaz. Tokyo, n. 259 p. 305 (1908). 5618 Characteres generis. — Stromate cum matrice concreto, et vagina foliorum semitecto, 5-14 mm. long., 1,2-2 mm. diam., pseudoparenchymatico, cartilagineo, albo; peritheciis 375-520 μ alt., 100-125 μ lat. hyalinis; ascis longe cylindraceis 270-330 × 5-6, octosporis; sporidiis filiformibus, 230-300 × 1,5-2, intus minute granulosis, guttulatisque, continuis. — Conidiophoris ramosis, tenuibus, 11-24 × 1,5-1,8; conidiis filiformibus, rectis v. flexis, 35-55 × 1,8-2 e hya-

lino roseis, demum 2-septatis.

Hab. in apice ramorum Phyllostachydis bambusoidis et Ph. puberulae (Graminaceae), Tokyo nec non in Sina austr. — Fungillus cladomanias generat.

- HYALOSPHAERA F. L. Stevens, Trans. Illin. Ac. of Sc. v. X, 1917, p. 172 (Etym. a hyalos hyalinus et sphaera). Perithecia hyalina et tunc colore sporarum ostendentia; asci paraphysati, sporidia colorata, 2-3 septata.
- 1. Hyalosphaera Miconiae F. L. Stevens, l. c. Maculae indefinitae, rugoso-circulares supra e pallide flavae 3-10 mm. diam.; infra pallidae et mycelio coriario vestitae centro ob sporidia cinereo-griseae; mycelium ex hyphis 5 μ cr., septatis, ramosis, hyalinis efformatum. Peritheciis levibus, maturis e sphaeroideis ovoideis, hyalinis, translucentibus, juventute omnino clausis maturis apice apertis sed non ostiolatis, 80-100 μ diam., stromate v. subiculo destitutis, parietibus apice 4 μ cr., ascis e clavatis oblongis, obtusis tenuiter tunicatis, numerosis, 8-sporis, paraphysibus numerosis ascos superantibus tenuissimis 1 μ cr. obvallatis; sporidiis linearibus, 2-3 v. plerumque 3-septatis, e fumosis brunneis, 40-57 × 5.

Hab. in foliis Miconiae laevigatae (Melastomataceae), Arecibo, Utuado, Maricao, Aguas Buenas, Ponce, Yabucoa, in Porto Rico, America Centr.

- BORINQUENIA F. L. Stevens, Trans. Illin. Ac. of Sc. v. X, 1917, p. 173 (Etym. a Borinquen antiquum nomen Portorici). Perithecia carnosa v. membranacea, ostiolata rubescentia; asci fasciculati, basilares, paraphysati; sporidia linearia, septata, brunnea.
- 1. Borinquenia Miconiae F. L. Stevens, l. c. fig. 3. Maculis nullis 5620 mycelio e coriario brunneo-superficiali; peritheciis copiosis, ovoideis, papillatis, hyalinis v. pseudo-parenchymaticis rugosis, praecipre ad basim, pilosis, pilis  $180 \times 150$  cr.; ascis numerosis cylindraceis  $69.65 \times 7.8$ , obtusis, tenuiter tunicatis octosporis, paraphysibus numerosis filiformibus,  $1.1.5~\mu$  cr., ascos superantibus obvallatis; sporidiis linearibus fumosis, guttulatis obtusis,  $55.65 \times 2.3$  plerumque incurvatis, septis non visis.

Hab. in foliis Miconiae laevigatae (Melastomataceae), Arecibo, Utuado, Costa Rica.— Sensu Saccardo ad Hypocr.-phaeoscolecosp. et tunc gen. Konradia affinis, sensu vero Lindau ad Hy-

pomycet. referendum et cum gen. Globulina et Torrubiella comparandum.

- DEXTERIA F. L. Stevens, Trans. Illin. Ac. of Sc. v. X, 1917, p. 174 (Etym. a Cl. Dr. E. G. Dexter cui dicatum). Mycelium omnino v. fere superficiale; perithecium astomum, parietibus tenuissimis v. collabescentibus praeditum, maturum ascos ostendens. Gen. Calonectriae affinis sed habitu et parietibus peritheciorum diversum.
- 1. Dexteria pulchella F. L. Stevens, l. c., fig. 4. Mycelio hypophyllo, 5621 rubescenti, superficiale sparsum; maculis nullis; peritheciis 18-25 ascos continentibus, maturis translucidis, stratu myceliali circumdatis; ascis e clavatis ovoideis v. ellipsoideis  $50 \times 15\text{-}22$ , octosporis, obtusis tenuiter tunicatis, paraphysibus nullis; sporidiis linearibus hyalinis 5-septatis,  $35\text{-}42 \times 4\text{-}5$ ; pycnidiis conformibus sed latioribus et obscurioribus,  $110\text{-}130~\mu$  diam.; conidiis linearibus,  $17\text{-}21 \times 3$ , 3-septatis.

Hab. in foliis Paulliniae pinnatae (Sapindaceae), Mayaguez, Porto Rico, Amer. Centr.

ERRATA - CORRIGE: Dimerosporium, cum specie Dim. Triumphettae Arn. (p. 478), ad pag. 242 et ad finem generis transferenda.